Classical Guitar Technique from Foundation to Virtuosity

A Comprehensive Guide

(in 81 progressive lessons)

Part 1—Foundation

guitar study

Stanley Yates

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— A Comprehensive Guide —

(in 81 Progressive Lessons)

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Part 1 — Foundation

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Classical Guitar Study Editions

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FOREWORD

With this work, Stanley Yates goes beyond the traditional concept of the guitar method or the guitar technique treatise. The history of the instrument includes outstanding examples, but none that constitutes an adequate precedent to this book from the Anglo-American master. From Sor to Pujol, from Aguado to Carlevaro, the most important authors have always and in every way operated within a well-defined historical and aesthetic purview. This infused their work with character, but also marked its limits. Yates, on the other hand, examines guitar technique and its related musical situations as a series of 'objects' for investigation under an approach that I do not hesitate to call phenomenological (referring to the teaching of Edmund Husserl and the masters of the School of Brentano). He puts forward intuitive experience and emphasizes the value of observation, accepting that these arise from one's point of view—without, however, raising the problem of subjectivity. He tends, therefore, toward a kind of epistemological awareness which does not stop at observation, but which points to the very essence of our act of experiencing and learning. In other words, his work is posed in terms of a knowledge that transcends itself, wrapped up in the phenomena of instrumental music-making (only guitar technique is dealt with, but there would be no obstacle to employing this phenomenology in the realms of piano or voice).

I am not able to evaluate the efficacy of this phenomenology without the direct supervision of its creator. However, Yates's thinking is in itself something formidable, and I would not be surprised if it came to be interpreted by teachers who have nothing to do with the guitar. This is what I hope and wish for its distinguished author.

Angelo Gilardino

Vercelli, Italy
2 September 2016

Pre-Publication Endorsements for *Classical Guitar Technique*

"This book represents an extraordinary accomplishment: for the first time presented together, the author offers us a sequential, rigorously calibrated and breathtakingly comprehensive pedagogical resource for the classical guitarist. From the most basic elements of playing to the most difficult and sophisticated techniques in current use, Yates gives thoughtful, scholarly and above all, practical lessons. His love of both the expressive possibilities of our instrument and the tactile experience of playing it are as obvious as is his mastery of the process by which virtuosity is achieved. This book may well be *the* indispensable method."

Stephen Aron
Chair Guitar Department
Oberlin Conservatory of Music

"The product of a lifetime of self-critical, analytical, and insightful artistry and teaching, Yates' magnum opus is the most thoroughly comprehensive guitar technique manual I've ever seen. One finds here many of the guiding principles found in the masterful teachings of Patrick O'Brien, as well as concepts of body usage one learns in the study of the Alexander Technique. The presentation is logical, and easy to follow. This work contains something of value for even the most advanced students and teachers of the instrument, and a great deal more."

Dr. Douglas James
Chair Guitar Department
Appalachian State University

"The great guitarists make it look easy. The question is how did they achieve such a high level? Finally, the answer is found in *Classical Guitar Technique from Foundation to Virtuosity*. Unlock the path to developing a graceful and musically expressive playing technique."

Bill Piburn
Editor
Fingerstyle Guitar Journal

"This monumental work by Stanley Yates is both a lucid summation of guitar methodologies and an innovative advancement of instrumental theory. Read it and learn."

Mark Delpriora
Chair Guitar Department
Manhattan School of Music
Instructor Undergraduate Studies
The Julliard School

CONTENTS

Preface 9

Introduction

Technique 11
What is Technique?

Developing and Practicing Technique 12
The Necessity of Optimizing Fundamental Technique · What are Movement Forms? · The Process of Optimizing a Movement Form · Refining Faulty Technique · Maintaining Internalized Technique

Additional Thoughts 15
Technique or Natural Facility? · Modeling Nature? · Tension or Relaxation? · Balance and Weight · Compound Movements (*Gestures*) · Hands Separately · Ease of Execution · Awareness and Sensation · Putting the Idea Before the Execution and the Power of the Inner Ear · Balance in All Things · Avoiding Injury and Optimizing Playing Longevity · The Individual · About the Metronome · Keeping a Practice Journal

Using this Book 21

A Necessary Acknowledgement 22

PART 1—Foundation

Introduction 25
Organization of the Right– and Left-Hand Sections · A Word About the Lessons · Practice Routines and Contextualization

Preliminaries

Daily Technical Practice and Warm-Up Routines 29
Awareness and State of Mind · Stretching · Warm-Up Template · Basic Warm-Up · Full Warm-Up · Comprehensive Technical Warm-Up · When No Warm-Up is Possible · After Practicing · Establishing a Routine

Sitting-Position 34
Sitting · Guitar Support or Footstool? · Positioning the Guitar · Positioning the Left Arm · Positioning the Right Arm · Seating Ritual

Tuning 39
Test Intervals

The Right Hand

Introduction 43

1 Hand Position and Plucking Action

1 The Basic Right-Hand Position 45
Forming the Basic Playing Position · Position of the Fingers Relative to the Strings · Position of the Thumb Relative to the Strings · Balancing the Thumb and Fingers—The Forearm

2 The Fingernails 48
Shape and Length · The Shaping Process · Polishing · Problem Nails

3 The Basic Plucking Action 53
The Non-Independent Finger-Group · Prepared Fingers-Only Block Chords · Finger-Pairs and Individual Fingers · Developing Finger Independence · Developing the Ring Finger · Incorporating the Little Finger · Free Stroke or Rest Stroke?

4 The Thumb 57
Solo Thumb Stroke · Thumb and Fingers Together

5 Refining the Basic Stroke 60
Defining Tension-Levels · Preparing the Stroke · Moving Through the Strings and Follow Through · Returning to the Strings · Legato—Returning and Preparing Close to the Strings · Consistency of Sound · Practice Routine and Contextualization

2 Arpeggio Technique

6 Arpeggio Technique 67
Fingers-Only Patterns · Practice Methods · Practice Routine and Contextualization

7 The Common Thumb-Finger Arpeggio Patterns 73
Categories of Common Thumb-Finger Patterns · Practice Routine and Contextualization

8 The Compound Stroke 75
ma—am at speed · The Circular Arpeggio · Practice Routine and Contextualization

3 Alternation Technique

9 Shared-String Alternation and String Crossing 79
Hand Position and Finger Curvature · Stroke Preparation and Legato · Consistency of Sound · String Crossing · Correcting Awkward String Crossings · Further Arm-Movement · Practice Routine and Contextualization

10 Finger Alternation Accompanied by the Thumb 85
Balance and Independence Between the Thumb and Fingers · Practice Routine

11 Developing Alternation Speed 87
Practice Methods · Practice Routine

4 Other

12 Tremolo 91
Technical Development Sequence · Hand Position · **am** Compound Stroke · **ami**—**amip**—**pami** at Speed · Staccato Practice · Practice Routine and Contextualization

13 Rest Stroke 98
Rest Stroke with the Fingers · Single-Finger Rest Stroke String Crossings · Free Stroke / Rest-Stroke Mixture· Practice Routine and Contextualization

14 Introductory Rasgueado Exercises 103
Single-Finger Strumming · Basic **cami** Rasgueado · Practice Routine and Contextualization

The Left Hand

Introduction 107

1 Hand Position

15 Basic Position of the Left Hand and Arm 109
Forming the Basic Playing Position · The Left-Hand Thumb

16 Refinement of the Basic Position 112
Parallel Position · Rotated Position · The Lower Position · Hyper-Parallel Position · Favoring the Weaker Fingers · Placing Block Chord Shapes · Changing Between Chords in Arpeggio Textures (Sequential Finger Placement) · Practice Routine and Contextualization

17 Barres 120
Developing the Technique · Arm Weight and the Upper-Arm Muscles · Fingering Tips · Further Barre Types · Maintaining Barres Over Extended Time Spans · Practice Routine and Contextualization

2 Independence and Coordination

18 Precision, Tension, Coordination, and Independence 124
Precision · Tension Levels · Coordination—Compound Gestures and Legato · Finger Independence · Practice Routine and Contextualization

19 Touch (Sensitivity) and Independence Exercises 128
Melodic · Chordal · Practice Routine

20 Melodic Coordination Exercises 130
Preliminary Exercises · The Common Finger-Combinations · Practice Methods · Practice Routine and Contextualization

21 Independence Between the Hands 138
Combining Disparate Finger Groupings Between the Two Hands · Practice Routine

22 Intervallic Coordination Exercises 140
Coordination of Finger Pairs · Chordal Form · Contrapuntal Form · Practice Routine

3 Shifting

23 Shifting Across the Strings 142
Role of the Thumb and Arm · Practice Routine and Contextualization

24 Shifting Along the Strings 146
Counterintuitive Aspects · Role of the Thumb · Ascending Shifts · Gauging Distances · Descending Shifts · Practice Routine and Contextualization

25 Fixed-Position Scale Practice 151
Practice Methods · Right-Hand Fingerings · Practice Routine

26 Interval Scales 155
Role of the Thumb · Practice Routine

4 Slurs

27 Ascending Slurs 157
Hand and Finger Position · Control of Tension · Preliminary Exercises—Single Fingers · Finger Pairs · Three and Four-Finger Groups · Controlling 'Fly-away' Fingers · Slurring from Open-Strings · Practice Methods · Practice Routine

28 Descending Slurs 164
The Slurring Finger · Finger-Pairs · Simultaneous Placement of Fingers · Practice Routine

29 Three- and Four-Finger Descending Slurs 168
The Three-Finger Diatonic Figures **421** and **431** · The Four-Finger Chromatic Group **4321** · Slurs in the Lower Position · Practice Routine

30 Compound Slurs 171
Ascending-Descending Compound Slurs · Descending-Ascending Compound Slurs · Practice Routine and Contextualization

Appendices

1—Full Warm-Up Routine 175

2—Tuning 181
Common Tuning Methods · Equal Temperament · Equal-Temperament Tuning Method · Biased Tunings · Dealing With Scordatura · Tuning in Performance

3—Practice Grids 187

In Part 2 of Classical Guitar Technique (Mastery and Virtuosity) 193

Critically-Acclaimed Editions by Stanley Yates 195

PREFACE

Every performer in each practice session gains insight into some aspect of their work. The same can surely be said for every teacher in each lesson. Several years ago, as a performer and as a teacher, I began making notes about these kinds of things. I'm sure that many other performers and teachers have done the same.

What a pity it is that these things almost always go unpublished. Still, the reason for this is pretty clear. How do we make this kind of information useful to others, or even to ourselves? While we might arrange our ideas under a few general headings—'circular arpeggios,' 'fast scales,' 'cross-string ornaments'—how useful would such a collection of tidbits be to someone searching for a systematic way of developing their playing technique? For this kind of information to be truly useful, an underlying organization and methodology is needed, and this has been the principal challenge in writing this book.

While not intended to be a method book, the exploration of guitar technique presented here nevertheless takes the form of a series of self-contained lessons, follows a sequential plan, and attempts to tie playing technique to musical context (something that's essential for technique to be deeply internalized and truly useful).

Representing my experience as a concert performer, masterclass teacher, university professor, and self-teacher (as we all ultimately are) this book reflects not only what I've learned through my own technical development, but also what I've learned through helping student guitarists find solutions to their own problems of developing reliable and musically-effective playing technique. Through all of this, I do realize that playing technique is ultimately a personal matter, that each of us determines what does or doesn't work. Still, this doesn't mean that fundamentally-effective technical concepts and practice techniques differ from player to player—I doubt that anyone ever got very far without somehow coming across them.

But what *is* playing technique, exactly? In the Introduction to this book, I describe what I consider playing technique is, along with how it may be conceptualized, developed, practiced, internalized, applied, and maintained. I distinguish between *fundamental movement forms* (the movements that make up the basic playing actions of each hand) and the more sophisticated movement forms and combination of the hands required for advanced technique and mastery of the instrument—this book falls into its two main parts along these lines.

While approaching virtuosity, this book is intended to be useful to any serious player who wishes to develop and refine their playing technique, at whatever stage of development they may find themselves. Furthermore, advanced players will probably gain as much development of their existing technique from the first part of this book (Foundation) as from the second (Mastery and Virtuosity). I also hope that teachers will find this book useful as a source of technical and pedagogical information.

One final point, essential to mastering any complex activity: our goal is simply to make difficult things *easy*—we're able to do easy things extremely well.

SY

INTRODUCTION

Technique

What is Technique?

In the broadest sense of the term, *technique* is nothing more than a way of going about things, an approach to tackling something that's in some way beyond our natural, unpracticed capability. As musicians, our technique, in this sense, is simply our approach to playing our repertoire well. A further common use of the term is found in assessments of this or that player as having 'poor technique,' 'good technique,' 'amazing technique'—usually descriptions of the accuracy level and appearance of effortlessness in performance.

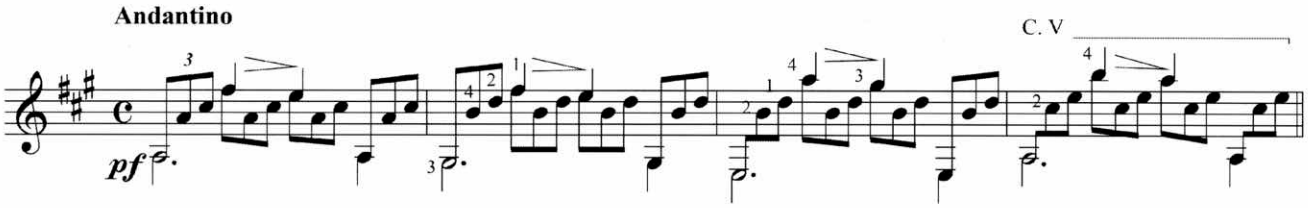
None of these uses of the term tells us much about what playing technique actually *is*.

More specifically, *instrumental technique* may be defined as a set of internalized (automated) *movement forms*.

While many movement forms are possible, only relatively few of them are required for the majority of technical events that present themselves in any particular piece of music. One may wonder, then, why can't we simply internalize this select group of movements and immediately play any given piece without practicing it? The answer, of course, is that there are an almost limitless number of ways in which the movement forms can be combined with one another—in the same way that from a relatively small number of musical shapes an almost limitless number of unique musical compositions may be created. This unique and constantly varying collection of movements presents the main technical challenge to internalizing (learning) any particular piece of music.

Movement forms, however, can be of variable quality, depending on how they've been internalized. This suggests that a first goal of technical development is to internalize reliable versions of the forms required for playing the guitar, with the further goal of developing an efficient means of applying them in a given musical situation.

The process of developing technique would therefore appear to consist of determining what the fundamental movement forms are, adopting an efficient way of internalizing them, and developing a systematic way of applying them to the music we wish to play. But there's more to technical development than this. Consider, for example, what's needed to play the following passage effectively (an excerpt from an easy-intermediate study):



Beyond producing a pleasing tone, changing smoothly to each new chord without extraneous noise or breaks in legato, and not missing any of the notes, there's also the

need for fine control of the relative dynamic levels and timbre of the bass, melody, and accompaniment, and fine control of dynamic and rhythmic nuance associated with the shape of the phrase, its note groupings, and the relative degrees of tension created by the harmonic progression. Clearly, playing technique is inseparable from musical expression.

While it's possible, in theory, to develop an efficient mechanical playing technique entirely through the study of abstract exercises, this technique would be almost useless for performing a piece of music. Musical shapes are so filled with rhythmic, dynamic, and timbral nuance that, at any given point in a composition, a myriad of subtle technical events are taking place simultaneously.

Since, presumably, no one wishes to play music inexpressively, the process of developing technique must ultimately be tied to musical shapes. Our goal isn't simply to develop a reliable and comfortable finger technique; it's to develop an organic technique responsive to expressive musical demands as well—a *musically-sensitive technique.*

Before we can begin to look at ways of developing technique, as we have now defined it, we must acknowledge that it cannot be developed in a musical vacuum.

> We can also consider technique in a performance context: the technique required for a detail -oriented interpretation committed to a solo recording is quite different to the technique required for the more dramatic extremes of concert playing (and we can make a further distinction along these lines between solo performance on the one hand and chamber and concerto performance on the other).

Developing and Practicing Technique

The Necessity of Optimizing Fundamental Technique

The central goal of technical work is to develop control, ease, and flexibility in all areas of our playing. Without these essential qualities advanced technique is out of reach, difficult passages are unplayable, expressive playing is unattainable, and even the simplest passages remain unreliable.

An optimized technical foundation allows us to play all of our basic technical events with control, ease, and reliability; it provides the foundation needed for developing advanced techniques, for playing complex technical events and, ultimately, for virtuosity. Most importantly, ease and control provide the flexibility needed to make detailed musical gestures and to play music expressively.

No different than any other system, the effectiveness of our technique is determined by its weakest link, and the more fundamental that link, the less effective the whole. It's therefore necessary not only to develop an optimized foundation technique, but also to constantly revisit, refine, and maintain it.

Since the most important aspects of our technique are the most basic ones—our hand and arm positions, the way we place our fingers on the strings and our internalized fundamental movement-forms—these aspects have to be honed to a precise level, optimized, maintained, and constantly refined if our playing technique is to be truly effective.

Much traditional technical work, on the other hand, seems to focus almost entirely on what we *can't* do (fast scales, tremolo, etc.). While it's of course important to develop advanced technique if we are to perform advanced repertoire well, we should also bear in mind that the majority of technical events in any piece are basic ones; we need to do these as well as we possibly can. Genuine technical control and refinement come from playing a lot of music, and playing it well. Our repertoire must therefore be well within our technical means. Contrast this with a process that consists of an endless series of hurdles, with our goal of refinement and full control always a little out of reach.

It's also important to expand our technique, of course, though misconceptions often exist about how to do this. The most effective way to develop technique is to combine refinement and reinforcement of basic things with work on material that's *appropriately* challenging and that can be assimilated in a reasonable time span (weeks rather than months). This idea applies not only to technique but also to our repertoire choices. We must always play well, with control, ease, and full expression.

What are Movement Forms?

A *movement form* is an internalized (automated) technical action that consists of multiple components that we nevertheless perceive as a single idea (a *gesture*). Like a hand clap. They form the basic building-blocks of our technique and can be combined, extended, adjusted, and elaborated upon.

A movement form can be as simple as placing a particular finger on a particular string or something more complex, such as a cross-string ornament. Through practice over time, large chunks of the music we play become nothing more than extended sequences of internalized movement forms.

Almost all technical actions required to play any particular piece of music are derived from a relatively small collection of movement forms, many of which are elaborations of even more basic forms—*fundamental movement-forms*. These basic forms, while consisting of multiple components, can't be practically broken down to anything simpler.

Since these basic forms make up the technical actions of every piece we play, it makes sense that we do everything we can to optimize our internalized versions of them. Beyond this, technical development consists of little more than internalizing the combinations of the forms that comprise the common vocabulary of actions we refer as 'technique.' Learning new repertoire, in terms of technique, consists of developing combinations we haven't previously internalized, and in internalizing the unique event-sequence for the piece in question.

The Process of Optimizing a Movement Form

In almost all cases, the optimization of a movement form deals with just two things: timing and tension. These two considerations provide the basis for precision, reliability, speed, control, and ease.

The process of practicing (developing, refining, and maintaining) a movement form is quite straightforward, though easy to overlook. We proceed as follows:

1) isolate, explore, and refine its individual elements
2) recombine these elements into a composite gesture

3) refine and internalize
4) exercise the internalized movement-form in a comfortable musical context

We use a set of standard practice techniques to accomplish this, usually in the following sequence:

1 Sequential Addition of Elements
2 Slow-Fast Alternation
3 Accentuation and Dynamics
4 Rhythmic (motivic) Variation
5 Contextualization

In the first phase, elements are explored individually before being combined sequentially to build-up the complete movement-form. In the second phase, the movement form is practiced in slow-fast alternation, allowing the ease and perceptual control present in the slow version to inform the lightness and spontaneity of the fast version (which is now becoming increasingly internalized), and vice versa. In the third phase, the application of dynamics provides access to individual elements within the internalized movement form, now played as a gesture (through accentuation), as well as allowing us to explore and refine the various tension levels present (through crescendo and diminuendo). In the fourth phase, further refinement is provided through the use of rhythmic motives that provide bursts of speed between selected elements within an overall controllable moderate tempo. Once the final phase has been completed the movement form becomes fully internalized (habituated) by exercising it in an appropriately comfortable musical context (a study or other piece), connecting it with other forms and indelibly associating what would otherwise be abstract technical events with musical shapes, sounds, and sensations.

Refining Faulty Technique

When practicing without sufficient thought or care, bad habits form easily and inappropriate tension-levels and inaccurate movements result. With repetition, an ineffective and inconsistent playing technique soon becomes internalized. Refining faulty technique is, of course, more difficult and time consuming than simply plugging-in correct movements and sensations in the first place.

The process of correcting faulty technique requires the following steps

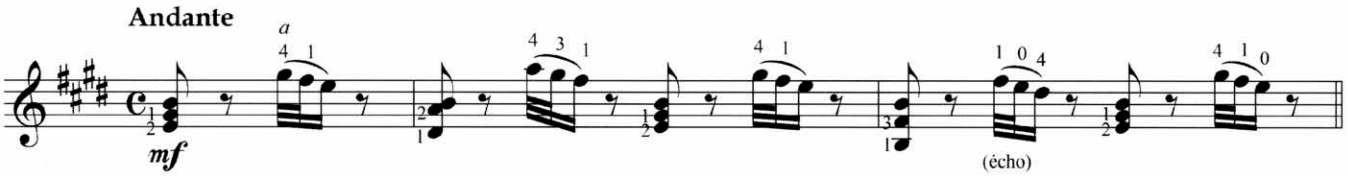
1) exaggerating the incorrect movement and its accompanying sensation to get a clear idea of what we wish to avoid
2) alternating between this exaggerated version and an optimal version to gauge the difference in movement and sensation
3) repeating the correct version until it feels comfortable
4) repeating this entire process until the correct version becomes habitual
5) reinforcing the correct version by exercising it in a comfortable musical context

It's essential to avoid playing music or exercises that we associate with faulty execution and, in time, it will be possible to relearn a piece or exercise using the correct movements and sensations. The key, of course, is to thoroughly internalize the sensations associated with the correct (easier and more reliable) version and avoid mindless repetition of the poor one.

Each new piece we adopt, on the other hand, provides us an ideal opportunity to internalize an optimal technical version of it, one that won't require a time-consuming re-learning later on.

Maintaining Internalized Technique

Although our technique becomes increasingly internalized (second nature) it's nevertheless important that we consciously maintain it. Basic movement forms can be maintained through a daily warm-up routine (a later section deals with this). More advanced movement forms can be maintained by periodically working on an adopted comfortable study or other appropriate piece that uses it relentlessly. For example, to maintain an optimized descending-slur technique one could use Fernando Sor's Op. 6 No.3:



The idea is to carefully learn the study with optimized movements, sensations, and expression, and periodically rework it to maintain the technique it deals with. Over time, we accumulate a focused set of studies that address and maintain the main areas of our technique. Repertoire suggestions along these lines are provided throughout the various sections of this book and have been taken from standard repertoire etudes and other appropriate pieces that all guitarists surely study and play. This kind of repertoire should be involved enough to require a fully internalized version of the technique it uses, but not so involved that we can't experience its sensations. For this reason, the majority of studies and other repertoire recommended for maintenance are of an intermediate level (with some exceptions).

> Avoid the mistake of thinking that fundamental technique can be developed solely by playing studies; studies are for maintaining and combining movement forms with one another once they've been optimized as abstract exercises.

Additional Thoughts

Technique or Natural Facility?

We've all been inspired by the transcendent abilities of iconic performers, and it's only natural—and to an extent, desirable—that we would wish to emulate what we can discern of their technique, musicianship, and artistry. When it comes to playing technique, though, much of it is invisible to the observer; most of it exists for the performer only, as physical and psychological sensation. The way something *feels*, at least to an experienced player is far more relevant to developing technique than how something *looks*.

Is it possible that an iconic player may play well *despite* their technique? Individuals who possess a high degree of natural coordination, fine motor skills, and quick reflexes, not to mention tremendous motivation, are often able to play extremely well without having necessarily found the easiest, most efficient way of doing things. In other words, an accomplished performer may possess a high degree of natural facility and personal motivation but a less than optimally-developed instrumental technique in the sense of having found the easiest possible way of doing things.

Analyzing the playing techniques, sitting positions, and hand positions of iconic performers can therefore result in misleading ideas about effective playing technique. The majority of students (as well as many accomplished performers) possess—almost by definition—normal, average natural facility, which must be augmented by *technique* for controlled, effective playing to take place. With this in mind, we may further define technique as the elaboration and augmentation of natural facility. In other words, we may view technical development as an ongoing search for the most comfortable, efficient, and reliable way of doing things that *don't* necessarily come naturally to us.

Modeling Nature?

Musical instruments have evolved over thousands of years in response to materials and human physiology and, in this sense at least, there's something natural about playing them. Still, playing a musical instrument isn't an entirely natural activity (if it was we wouldn't need to develop technique in order to do it). Nevertheless, we aim to play in the most natural and efficient way possible.

Unfortunately, few of the movements required to play a musical instrument are entirely natural, in the sense of walking, grasping, or scratching an itch, and we can only aim to model our playing technique after natural movements with the understanding that we'll often need to modify or elaborate upon them in order to adapt them to the demands of playing the guitar. It's therefore useful to think in terms of a natural movement as a starting point from which a more sophisticated or refined movement needed to play the guitar can be developed. For example, a loosely-held fist is a natural model from which, with some adjustment and refinement, the fundamental playing positions of the hands can be derived.

Still, there's no entirely natural way of playing a musical instrument.

Tension or Relaxation?

Since we're never totally relaxed nor totally tense but always somewhere between the two, the relationship between tension and relaxation requires consideration.* Although we aim to play in the most relaxed way possible, all movement (as well as readiness to make a movement) requires some degree of tension—total relaxation would result in us falling to the ground and laying there motionless! Tension is needed to sit in a chair, to form hand positions, and to make the movements needed to play our instrument. A distinction can be made, however, between *productive* and *counterproductive* tension. Productive tension implies the selective use of only the muscles necessary to produce a particular physical state or movement, with a degree of precisely-timed force appropriate to the task. Counterproductive tension, on the other hand, implies that muscles other than those needed to complete a task are needlessly employed, or that the force or strength exerted is excessive, or is introduced earlier or retained longer than it need be. Efficient use of tension results in graceful movements and an appearance of ease. Counter-productive tension results in awkward, strained movements and hand positions, and appears (and is) difficult.

A distinction can also be made between the amount of tension required to be in a state of readiness to make a movement, the amount of tension required to make it, and the amount of tension required to recover from having made it. The first of these consists of a base-level of minimal tension, a readiness to act; the second, of something briefly a little more than that; the third something almost imperceptible.

Learning to accurately distinguish between levels of tension in our playing is challenging; we expend far more effort even in regular daily activities than we really need to (we can easily test this by examining the way we use our bodies in such mundane activities as brushing our teeth or opening a door). Awareness and the realization that we do indeed overcomplicate and, to varying degrees, overexert ourselves in even our most routine daily activities is a first step in developing a more efficient approach to the use of our bodies, in daily life as well as in playing a musical instrument.

*I use the term 'relaxed' throughout this book and I should clarify what I mean by it: the term is relative and signifies a minimal level of tension rather than complete relaxation.

Balance and Weight

In addition to the force or pressure exerted by the muscles, gravity is a further factor to consider in determining efficient playing technique. For example, in order to avoid using excessive muscle power to maintain a stationary sitting position, attention can be given to developing a balanced posture that allows gravity to center the body but not pull it one way or the other. Furthermore, with an appropriate playing position, the downward pull of gravity acting on the mass of the arms can provide an element of weight that can be used in combination with the muscles to provide the force or pressure necessary for certain aspects of playing. The opposite is also true of course—gravity, acting on the mass of the body, can reduce our ability to maintain an efficient sitting position and an easy playing technique.

Compound Movements (Gestures)

We rarely make movements that are simple or isolated; rather, physical actions usually consist of a combination or a series of movements that we nevertheless perceive as a single sensation or *gesture*. Consider, for example, the number of movements involved in a hand clap: not only does this involve the simultaneous movement of both arms toward each other, it also involves a preparatory movement of both arms away from each other, and perhaps a movement of the arms away from one another following the clap itself. Nevertheless, we perceive a hand clap as a single event or gesture. Consider how many simultaneous movements are needed to move from one note to another in a scale passage.

The use of compound movements (*gestures*) is essential to the development of instrumental technique. Not only is this the perceptual reality of most movement forms required to play an instrument, it's also an essential consideration for internalizing them.

Hands Separately

Despite the compound nature of most movement forms required to play the guitar, and the perceptual benefits this can bring to our playing, it's still necessary to examine the individual elements that comprise them. This is particularly important when a playing action requires simultaneous action of both hands, as most do. The mental processing required to make independent use of the hands simultaneously is such that it's impossible for us to give full attention to the sensations of any one hand when the other is also playing (the same is true of the individual fingers within a hand). For example, we've all probably noticed that on occasion a hasty left-hand shift has resulted in an inadvertent accent in the right-hand. More subtle, though, is the fact that our hands easily retain tension, even when executing the simplest of movements. The only way to fully experience the sensations present in the hands and fingers is to explore the movements of each before combining them. This is an essential consideration when internalizing fundamental movement-forms.

Ease of Execution

Playing the guitar, at first, isn't easy. But it must become so—otherwise we could never do it well.

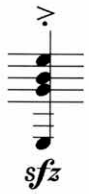
One approach to technical development (or learning a new piece, for that matter) is the elimination of difficulties. Even better, though, is to not allow difficulties to occur in the first place. We experience difficulty when we haven't accurately internalized our technique, when we practice too quickly and without full awareness, or when we work on material that's distant from our internalized technique. The most productive approach to technical development is to practice in such a way that everything *is* easy, and the way to achieve this is to work on musical segments that are short enough to play with full awareness. I discuss practice methods in detail throughout this book, but suffice it here to say that the goal of technical practice is to discover the easiest, most comfortable way of reliably meeting our musical objectives.

Awareness and Sensation

As already mentioned, much of what we perceive as technique while playing is a vague series of sensations in the hands and arms. Through practice we learn to associate the *idea* of a movement form with the physical sensation required to execute it, and it's therefore essential that we undertake our technical practice with a good deal of awareness of how things actually feel. As an example, pick up your guitar and, without thinking much about it, prepare to play the following descending slur (but *without* actually playing it):

Now, stop and gauge the amount of tension present in your left-hand fingers, thumb, hand, arm, and shoulder. Is it possible to reduce some of it? (If it isn't, congratulations!)

Likewise, prepare to play the following chord, but just before you're about to do so, stop:



Again, register the amount of tension in your right-hand fingers, hand, arm, and shoulder. Could you have prepared for this action with more comfortable sensations in the various parts of the hand and arm?

Unless you already possess a highly-developed playing technique, it's unlikely that you were able to prepare to execute these basic technical events with only the minimum of necessary tension; more likely, you were easily able to discover a more comfortable, less tense sensation that allowed you to feel prepared to execute the movement. Hopefully, you also registered a feeling of lightness, security, and balance that's now available for you to recall mentally if you retry the experiment.

We must constantly monitor our practice, isolating elements and assessing how they feel (playing eyes closed as part of our practice is an effective way of achieving this).

Putting the Idea Before the Execution and the Power of the Inner Ear

Effective practice begins with an *idea,* and the clearer the idea the better the execution. By imagining (*visualizing*) a movement before executing it we increase our awareness of how it actually feels and we are better equipped to assess the result. Just as important, is the need to *audiate* (hear the musical sound mentally) before playing. Careful listening is essential to developing playing technique—it directs our fingers to create the sounds, rhythms, and nuances present in our inner ear. Not only do visualization and audiation evoke the required internalized movement-forms, they also provide a yardstick with which we may assess our sound and expression during practice and performance.

Both practice and performance are as much psychological activities as they are physical ones, and much physical practice can be augmented (or even replaced) by purely visualized practice, as many professional musicians can confirm.

Balance In All Things

The necessity of achieving a balance in all aspects of life is a cornerstone of many philosophies. It can also be a cornerstone of our approach to playing the guitar. Almost any dialectic we can imagine has a potential application to our analysis, study, and practice: fast-slow, loud-soft, crescendo-diminuendo, accelerando-ritardando, tense-relaxed, analytic-intuitive, aware-internalized, visualize-act, rest-movement, isolate-synthesize, and so on. A simple but powerful approach to technical development is to determine which side of a dialectic relationship we are on, and balance it with an exploration of its opposite. For example, to develop a relaxed slurring technique explore how it feels to play a slur with tension; to play with good coordination between the two hands, explore each hand separately; to play fast, practice slow, and so on. If we find ourselves between two opposites, we've either achieved a balance or we may be doing nothing useful at all.

Moderation is a further outcome of a dialectic approach: we moderate our impatient desire for the long-term goal of mastery by patiently mastering many small short-term goals along the way, we moderate our desire to practice for three hours at a time by practicing for one hour three times over the course of the day, and so on.

Of course, there's no such thing as *perfection,* only the attempt to achieve it.

Avoiding Injury and Optimizing Playing Longevity

While playing a musical instrument doesn't require the athleticism of a tri-athlete, it's a physical activity nonetheless and, due to the repeated and prolonged use of small muscles and other delicate tissues, one that makes us susceptible to strain injuries that can be incapacitating. Injuries of this type often result from over-practicing during periods of intense study, but can also appear simply due to years of inappropriate practice, inefficient technique, or both.

We can eliminate the potential for injury by avoiding marathon practice sessions (several sessions of 45-60 minutes spread over the day is appropriate), by warming-up sufficiently before practicing and stretching after practicing, by using mental as well as physical practice, by taking the steps necessary to fully optimize all areas of our playing

technique, by avoiding repertoire that is distant from our internalized technique, and by adopting a patient approach.

Still, probably the most important aspect of avoiding injury is simply to avoid over-practice—intelligent practice is always more effective than practice that may be more extended but lacks full awareness.

> Over-practice in the areas of performance tempos, dynamics, rubato, and other expressive phrasing effects is, of course, a good thing (and is diametrically opposed to its opposite!).

The Individual

Sometimes, individual physiology doesn't allow for the fullest development of an established technique using traditional fingerings (fast **ma** alternation, for example). Individuals nevertheless often develop alternative approaches that can result in even greater technical advantage (and I've attempted to include at least some alternative approaches in this book). Probably all high-level performers have developed 'idiosyncratic' technique in some area of their playing as an effective solution to a traditional technical approach unsuited to their personal physiology.

No matter how many teachers we work with or how many masterclasses we attend, ultimately we are self-teachers. This book, or any instructional book for that matter, can at best function only as a guide to an individual development that ultimately follows its own path.

About the Metronome

Most musicians make use of a metronome during their practice, and there are of course very good reasons for doing so. However, I would like to caution against a habit of 'ramping-up' as an attempt to *force* an increase in tempo of an exercise or piece. The goal in developing technique is to strive for full control and, therefore, ease of execution—successive ramping-up with a metronome can be counterproductive to this, not least because slow practice tempos allow us to make complex or inefficient movements that we may not able to reproduce at performance tempos. Velocity in movement forms and short passages of music is better practiced in slow-fast alternation, at least until the material is well internalized. Once things have become comfortable, practicing at a variety of tempos using a metronome can be a useful part of one's practice. And, of course, there's nothing wrong with using a metronome to check the tempo and rhythmic accuracy of our playing, and to help us ease towards (and beyond) our intended performance tempo. But this is not the same as a counterproductive attempt to force rapid execution of presently difficult things through a time-consuming and essentially mindless bit by bit ramping-up of the tempo.

> And, in any case, the phrasing and musical quality of movement of so much of our repertoire defies metronomic practice and execution.

Keeping a Practice Journal

Keep a journal at hand as you practice and make notes of things that occur to you—I guarantee that you won't regret it (it might even eventually result in a book such as this one!).

Using this Book

All who wish to use this book should should work through all of the lessons in the order presented, no matter what your present technical level (for advanced players, much of this will not take very long). As mentioned earlier, not only will this provide an opportunity for you to assess your technique as it presently exists, it will also provide an opportunity to refine it.

Lessons from the Right-Hand sections should be studied together with lessons from the Left-Hand sections, though the lessons within each section should be studied in the sequence presented. Part 2 shouldn't be studied until the material in Part 1 is genuinely comfortable.

Always bear in mind that our goal is for full control and, therefore, ease; a patient approach that allows each step to be assimilated in the time it needs will lead us to our larger goals much more quickly than an overly eager approach that will undoubtedly lead to imperfections to be battled later on. Take the time you need to read and absorb the information in each lesson and try it out to gain a full understanding of the format of each exercise and how it be should be practiced before adopting the Practice Routine provided at the end of the lesson.

Since, perhaps counter-intuitively, there's usually much more to be understand about fundamental technique than advanced and even virtuosic technique, the early lessons (in both right- and left-hand streams) may appear a little pedantic, even laborious perhaps. Nonetheless, it's important that the technical foundation be fully understood and optimized if it's to support the larger goal of developing a reliable and musically-effective advanced playing technique later on (I also hope that the detail of information will be useful to teachers of our instrument). To help make these lessons as direct as they can be, almost all information not essential to using the actual exercises themselves has been placed at the end of each lesson in a Notes section. Though usually quite short, these sections often contain a lot of information, especially when a lesson deals with a fundamental technical issue.

Almost all of the Practice Routines are designed to take around 10-15 minutes (often less). Since lessons from both right- and left-hand streams are studied together, a typical technical practice session should take around 20-30 minutes (following a short warm-up). The routines are based on a six-day practice week and equate over a two-week period to two six-day cycles, three four-day cycles or four three-day cycles, depending on the particular lesson. Practice Grids are provided for those lessons that require them—these are intended to act as progress checklists, and to help keep track of day-to-day exercise sequences.

More information concerning the logistics of the study sequence, practice routines, and schedules is provided in the introductions to the various sections of this book as well as in the lessons themselves.

Also in the interest of the efficient use of our time, both in the short term and the long term, the lessons in this book focus selectively on the essential patterns that occur

frequently in practical playing situations, rather than adopting an unnecessary and time-consuming 'carpet-bombing' approach that treats all possible patterns and their permutations as equally useful.

This Introduction is followed by a Preliminary section that addresses Daily Technical Practice and Warm-Up Routines, Sitting Position, and Tuning. Part 1 concludes with a section of Appendices that contain a sample Full Warm-Up Routine, additional information regarding Tuning, and a number of Practice Grids to help keep track of the various lesson Practice Routines. Part 2 concludes with appendices dealing with Special Effects, Fingering Guidelines for the two hands, the Technical Approach to Learning a New Piece, an overview of Iconic Method Books and Study Sets, and further Practice Grids.

A Necessary Acknowledgement

No one develops their ideas in a vacuum. During the formative years of my development as a guitarist and musician I read and considered everything I could find on the topic. This included publications by historical writers as well as modern ones, my observations of iconic performers, and the ideas I received from my teachers. Many years, concerts, and students later, much of this information has become second nature to me. Still, the ideas in this book have been influenced by many guitarists and by many other musicians.

Please visit the following websites to download blank Practice Grids, for periodic announcements, and for additional materials relating to this book:

www.StanleyYates.com
www.ClassicalGuitarStudy.com

I welcome readers to contact me by email at ***info@StanleyYates.com*** with observations or other comments they may have.

Part 1

Foundation

Introduction to Part 1

Part 1 of *Classical Guitar Technique* deals with fundamental movement-forms and the practice methods used to develop and internalize optimal versions of them. This material provides the foundation for the advanced techniques and practical applications developed in Part 2.

Without the internalization of optimized versions of the fundamental movement-forms, advanced technique is a virtual impossibility (at least if it is to be controllable and reliable); careful study of the basic forms is therefore essential to the overall development of effective playing technique.

Organization of the Right and Left-Hand Sections

The preliminary material dealing with Daily Technical Practice and Warm-Up Routines, Sitting Position, and Tuning, is followed by the two main sections that make up Part 1 of *Classical Guitar Technique*. These deal with the right and left hands respectively. The topics in these sections are organized sequentially and build upon one another; it's therefore important that the lessons within each section be studied in the order presented. Lessons from the right- and left-hand streams should however be studied together (daily technique sessions therefore contain something for each hand.

Part 1 ends with 3 appendices, the first providing an example of a full warm-up routine, the second dealing with further issues relating to fine tuning, and the third providing Practice Grids to help you track your progress through the various lesson Practice Routines.

A Word About the Lessons

The early lessons in each main section contain relatively few exercises and are primarily descriptive and explanatory. The issues explored, however, are fundamental to effective technique and it's important that they are explored and understood. Subsequent lessons become increasingly exercise orientated.

Allow each lesson the period of time it needs; this may range from a few days to several weeks (or even longer). Each lesson stream—right hand or left—will therefore progress at its own pace. Once a lesson has been absorbed move onto the next one in that stream. Likewise, once you reach the end of a stream, continue onto the lesson stream for that hand in Part 2 (or take the opportunity to revisit earlier lessons you feel may need more work).

Should a lesson or exercise remain troublesome after a few weeks of practice, make a note of this and move on. You can revisit it at a later time, at which point it will almost certainly progress more easily.

Practice Routines and Contextualization

After exploring the text, exercises, and practice methods contained in any particular lesson, consult the concluding Practice Routine and Contextualization section for a template to help tackle the exercises in an organized and systematic manner. As the patterns and exercises in a particular lesson become comfortable, they may be taken out of the full practice sequence and simply played-through as part of the overall technical practice session while less comfortable patterns and exercises continue to be worked on with the full range of practice methods. The time spent on any particular lesson will therefore become shorter as exercises that become comfortable are taken out of the full practice cycle. Again, Practice Grids are provided in Appendix 3 to help you keep track of things.

Once the exercises in a lesson have been absorbed, use the suggested Contextualization material to periodically revisit and maintain the technique and move on to the next lesson in the stream.

The Lesson topics covered in Part 1 are as follows:

Preliminary

1 Daily Practice Sessions and Warm-Up Routines
2 Sitting Position
3 Tuning

Right-Hand Lessons

1 Hand Position and Plucking Action
1 The Basic Right-Hand Position
2 The Fingernails
3 The Basic Plucking Action
4 The Thumb
5 Refining the Basic Stroke

2 Arpeggio Technique
6 Fingers-Only Patterns
7 The Common Thumb-Fingers Patterns
8 The Compound Stroke

3 Alternation Technique
9 Shared-String Alternation and String Crossing
10 Finger Alternation Accompanied by the Thumb
11 Developing Alternation Speed

4 Other
12 Tremolo
13 Rest Stroke
14 Introductory Rasgueado Exercises

Left-Hand Lessons

1 Hand Position
15 Basic Position of the Left Arm and Hand
16 Refinement of the Basic Position
17 Barres

2 Independence and Coordination
18 Precision, Tension, Coordination and Independence
19 Touch (Sensitivity) and Independence Exercises
20 Melodic Coordination Exercises
21 Independence Between the Hands
22 Intervallic Coordination Exercises

3 Shifting
23 Shifting Across the Strings
24 Shifting Along the Strings
25 Fixed-Position Scale Practice
26 Interval Scales

4 Slurs
27 Ascending Slurs
28 Descending Slurs
29 Three- and Four-Finger Descending Groups
30 Compound Slurs

Appendices

1 Full Warm-Up Routine
2 Tuning
3 Practice Grids

Preliminaries

Daily Technical Practice and Warm-Up Routines

Expert players are experts at practicing...

technical practice sessions · preparing to practice—state of mind and physical preparation · the importance of warming-up · warm-up template · warm-up routines

While a comprehensive exploration of practice methods and routines would require a book-length study in itself, it's necessary here for us to take a look at the main issues regarding daily practice as they relate to technical development.

While the main reason for practicing an instrument is to learn and play music, at least some technical work should be part of daily practice, whether it be a warm-up, a lesson from this book, or some other type of technical practice session.

In terms of this book, a technical practice session consists of a short warm-up followed by work on a Right-Hand Lesson and Left-Hand Lesson. Again, this should take no longer than 20-30 minutes.

On days when insufficient time is available, technical practice can be assimilated into a warm-up of one kind or another (see later). On the other hand, from time to time (monthly or perhaps every couple of weeks) a more comprehensive technical practice session can be used to revisit and maintain previously-learned material (also see later).

Awareness and State of Mind

To prepare for productive practice of any kind we need to establish a calm and aware state of mind. Here's a straightforward method of accomplishing this:

- Simple Breathing Exercise

  1. slowly breathe-in, eyes closed, over the course of three counts and hold for a further three counts
  2. slowly breathe-out over of the course of three counts and again hold for a further three counts
  3. repeat this several times, focusing entirely on the sensation of breathing

Stretching

It's important to stretch the arms, shoulders, neck, and fingers to physically prepare for practicing (especially before the first practice session of the day).

- In a standing position, stretch out your arms, slowly moving them through their full range of motion. Return them to the side of your body in a relaxed position and slowly move your shoulders through their full range of motion. Do the same with your head.

- Next, again with the arms relaxed down by your side, move the wrists through their full range of motion, both with relaxed fingers and with fists.

- Finally, stretch, hold, and relax the fingers a few times (moving from a fist to splaying the fingers apart from one another, and back). You can also stretch the fingers of one hand, including the right-hand tip joints, with the aid of the other hand (but take care not to overdo this).

The hands should be physically warm before stretching

These exercises can be repeated as needed; each stretch, however, should be held for no more than two counts (see Notes).

Warming-Up

Warming-up helps us re-establish our contact with the instrument, our sitting position, hand and arm positions, basic movement forms, and techniques. It prepares us for the physical demands of playing, reduces the potential for physical strain, and increases our ability to practice for appropriate periods of time. It also eases us into our practice sessions and, most importantly, it helps us establish a positive frame of mind for the ensuing practice session or performance.

> ***Mise en place***
> It pays to be in the habit of having all of our practice materials ready to hand ahead of practicing—nail kit, pencil, eraser, highlighter, notebook, metronome, timer, etc. The last thing we need is a break in concentration brought about by a hunt for a pencil. *Mise en place!*

Warming-up is also an evolving process. Our warm-up routines continue to develop as we learn new techniques and refine existing ones.

And there are various types of routines, ranging from quick routines when little time is available, to more comprehensive routines that touch on and maintain a wide range of techniques, to the routines that might precede a performance.

Warm-Up Template

An effective approach to warming up (one used by many concert players) amounts to quickly 'relearning' our technique from scratch—a crash-course in playing the guitar that covers the fundamental technical aspects of the instrument in a logical and sequential manner. These might include the following:

Right Hand
- hand position
- block chords
- individual fingers (tone and dynamics)
- alternation (melody and velocity)
- string crossing
- compound stroke (**ma** independence)
- arpeggios
- tremolo#
- ornaments
- rasgueado

Left Hand
- hand position
- touch and sensitivity
- barres
- melodic finger combinations
- finger pairs (independence and extension)
- shifting (thumb sensitivity)
- slurs (finger independence)
- scales (coordination between the hands)

The precise content of these areas depends on the individual player, the time available, and the kind of playing we're preparing for. For example, we can't include techniques

such as compound stroke, tremolo, or right-hand ornamentation if we haven't studied them yet. The content of each area and the way we approach it therefore evolves as we develop and refine our playing technique and practice methods.

We may also decide that areas such as tremolo, right-hand ornamentation, rasgueado, or barres are superfluous to a basic warm-up. On the other hand we may wish to increase the content of several areas to maintain technique in lieu of a technical practice session. And we may wish to incorporate technical elements that are particularly relevant to the repertoire we are studying or about to perform at a particular point in time—right-hand ornamentation might become a priority when preparing a baroque suite while scale technique may assume particular importance before a concerto performance, for example. It's also the case that we don't always have the time (nor the need) to engage in a comprehensive warm-up routine.

Types of Warm-Up Routine

Since our warm-up can be tailored to the activity we're warming-up for, we can choose between several types. Here are three routines and the material they might include.

1 Basic Warm-Up
c. 5-10'

The following short warm-up consists of a few core exercises and is useful when time is short, when the ensuing playing activity is a more specific technical practice session, or when the practice session won't be too demanding:

Preparation	Right Hand	Left Hand
• Fingernail Care • Breathing / Stretching • Seating position • Tuning	• Establish Hand Position & Contact Points • Block Chords (**pima**) while holding a four-finger left-hand chord shape • Establish Free-Stroke Tone (**p, i, m, a**) • Arpeggio play-throughs (**pima** and **pami**) holding a four-finger left-hand chord shape	• Establish Hand Position & Contact Points • Slur play-throughs (**134, 431, 1234, 4321**) • A few Left-Hand Extension exercises • A couple of Scales (for coordination • between the fingers and hands)

As you work through the lessons in this book you'll develop increasingly effective approaches to exercising these elements.

2 Full Warm-Up
c. 15-20'

This warm-up is the kind of routine that can substitute for a technical practice session when time is short on a particular day. It touches on all of the fundamental movement forms and can include additional technical material geared toward the repertoire currently being studied. (You might also decide that not all categories are necessary—barres, rasgueado, and shifting, for example.)

The basic outline is as follows:

Daily Technical Practice and Warm-Ups

Preparation	Right Hand	Left Hand
• Fingernail Care • Breathing and Stretching • Seating Position • Tuning	• Establish the Hand Position • Block Chords • Individual Fingers • Shared-String Alternation • String Crossing • Compound Stroke • Arpeggios • Rasgueado	• Establish the Hand Position • Touch and Sensitivity Exercises • Barres • Melodic Finger Combinations • Finger Pairs • Shifting • Slurs • Scales

3 Comprehensive Technical Warm-Up c. 35'

This is the kind of routine one might undertake at some point during the day of a performance or for periodic comprehensive technical maintenance. For performance preparation, use the Warm-Up Template provided earlier and go through each area, emphasizing the techniques that will be used in the upcoming performance (tremolo, ornaments, scales, etc.). For technical maintenance, populate each area with the exercises and movement forms you wish to maintain (make a note of these in your practice journal).

When No Warm-Up Is Possible

Sometimes, no opportunity exists to warm-up before a performance (a masterclasses is a good example). In these situations, practice mentally (visualize and audiate) and periodically stretch the fingers. You may be surprised at how well it's possible to play under these circumstances having employed just these two simple techniques.

After Practicing

Just as it's important to warm-up in preparation for a practice session or a performance, it's also a good idea to 'warm-down' following a playing session. A little stretching (perhaps followed by soaking the hands and forearms in alternating warm and cold water, in the case of strenuous playing activity) will go a very long way to keeping the playing tissues healthy, strain-free, and ready for the next day's playing activity.

As mentioned earlier, however, the most important thing regarding performance injuries is simply to avoid over-practice.

Establishing a Routine

Experimenting with the various routines to find out what works best will at first be a little time-consuming. But with a little thought and organization your routines will become efficient and concise. Write them out in your practice journal.

NOTES

While very much subject to the goals of individual players and the varying amounts of time at their disposal, a reasonable daily practice routine for serious students would consist of several 45 to 60-minute practice sessions distributed over the course of the day that cover technique, repertoire, and other areas (such as sightreading, score study, exploring repertoire, etc.). This is of course susceptible to significant adjustment according to circumstances and individual goals, in terms of both the content of the practice sessions and the daily practice time available. Still, a 20-30 minute (or more) technical practice session should be a part of the daily practice of serious students, at least during the intermediate to advanced stages of technical development.

Demands on our daily life, on the other hand, can easily lead to varying degrees of reduced practice during which we may have time only for basic technical maintenance. Busy teachers and recreational guitarists, almost by definition, have limited practice time, and may easily find it difficult to find an hour each day to divide between technical practice and repertoire. In this case, practice material can be distributed over a several-day cycle.

Technique sessions are usually most effective as the first session of the day.

Awareness and State of Mind
In addition to the breathing exercise described, the following Progressive Muscle Relaxation Exercise is also useful (especially just before a performance): sitting in a relaxed position, independently tense and relax each part of your body moving systematically from the toes, to the feet, legs, buttocks, abdomen, diaphragm, shoulders, arms, fingers, neck, eyes, eyebrows and forehead, scalp and ears, nose and cheeks, lips, jaw, throat, and tongue, finally allowing the tongue to rest gently behind the lower teeth for a few moments.

Stretching
Stretching the fingers, of both hands, is invaluable for re-establishing finger independence, agility, and coordination (which also translates into improved accuracy, reliability, and speed).

It's useful to stretch the tip joints of the right-hand fingers with the aid of the left hand to maintain (and improve) their overall flexibility (this can aid various aspects of tone production).

Stretches held for more than two seconds can be counterproductive. For expert information about this, take a look into the Active Isolated Stretching (AIS) technique developed by Aaron Mattes.

Make sure that the hands and fingers are physically warm before stretching. This can be accomplished by rubbing the hands together, massaging the hands and forearms, by clapping or, in chilly environments, by soaking the hands and forearms in warm water (taking care not to moisten the fingernails). In addition, soaking the hands and forearms back and forth between warm and cool water (ending with warm) is recuperative following a strenuous practice session or performance.

Stretching, an entire subject in itself, is worth investigating regardless of our goals as guitarists.

Mise en place is a term borrowed from professional cooking and refers to the gathering and organization of materials and ingredients ahead of time.

Basic Warm-Up
Left-hand extension exercises with the guitar are invaluable for re-establishing finger independence, agility, and coordination.

Comprehensive Technical Warm-Up
Performers differ in their preferences to practicing and warming up on the day of a performance; while some follow a careful plan, others do very little of anything. Nevertheless, I would recommend that any extended repertoire or technical practice be done earlier in the day, reserving a shorter warm-up for the period just before the performance. My personal preference is to avoid playing through repertoire or tricky passages at tempo, and after a fairly short warm-up (that might include specific technical areas from my program—right-hand ornaments, tremolo, etc.) I focus on the initial finger movements of the opening piece. Just before walking on stage I do a little stretching; the last thing I do before walking on stage is control my breathing. The last thing I do before actually playing is to visualize and 'feel' the opening movements of each hand as I audiate the music.

Sitting Position

establishing a balanced sitting position · issues relating to the use of a footstool · positioning the guitar · positioning the arms

Virtually all aspects of efficient playing technique rely on an optimized sitting position. Inefficiencies and inconsistencies in sitting position, on the other hand, negatively influence other aspects of playing the instrument, making them less efficient, less consistent, and therefore more difficult and less reliable. It's therefore important that we carefully consider the various factors involved in sitting with and holding the guitar with a view to discovering the most effective way of doing this.

Sitting

A balanced sitting position is stable (doesn't fight gravity) and uses only the tension necessary to remain in place (the torso doesn't turn or lean in any way; the neck and shoulders are relaxed).

- Without the guitar (or a footstool), sit-up straight toward the forward edge of a chair (a relatively low chair is preferable to a high one), arms hanging down by your sides, and explore the following:
    - rocking a little from side to side and backwards and forwards to find a balanced, stable sitting position
    - relaxing the shoulders by moving them through their range of motion and then allowing them to hang naturally without tension
    - rotating your head through its range of motion to discover a centered position in which it simply rests on the neck and shoulders

Once a balanced sitting position is established, the guitar is positioned so as to cause the least compromise to this.

- The right foot normally rests flat on the floor in line with the left foot.

  It's also possible to rest on the ball of the foot, with the leg back and in towards the body—this position can increase the vertical angle of the guitar neck and allow for further adjustments during playing.

- The right thigh is positioned out to the right to allow the guitar to make a steep-enough angle to meet an effectively positioned left hand.

Guitar Support or Footstool?

While some players use a traditional footstool many players today use a guitar support to position the instrument for playing—the reason being that it's much easier to develop a balanced, stable, and relaxed sitting position with both feet on the ground.

If a footstool is used, the steps outlined earlier for developing a balanced sitting position will need to be re-explored with the left leg placed on the footstool, and for the extra challenge involved. With this in mind, the footstool is positioned as follows:

- centered relative to the player (rather than out to the left as is often seen)
- pointing straight forward or even turned in slightly to the player's right
- on a high setting

Checklist:

- sit-up straight, towards the front edge of the chair, shoulders level and relaxed
- footstool (if used) is centered and high
- left leg points straight forward (whether using a guitar support or footstool)
- right leg out to the right with the foot flat on the floor and in line with the left foot (or balanced on the ball of the foot if a steeper angle of the guitar neck is needed)

Positioning the Guitar

The guitar is positioned so as to cause the least compromise to a balanced sitting position and the optimal positioning of the hands and arms, and to minimize any potential damping of the guitar's vibrating surfaces.

- There are four stabilizing contact points between the guitar and the player:

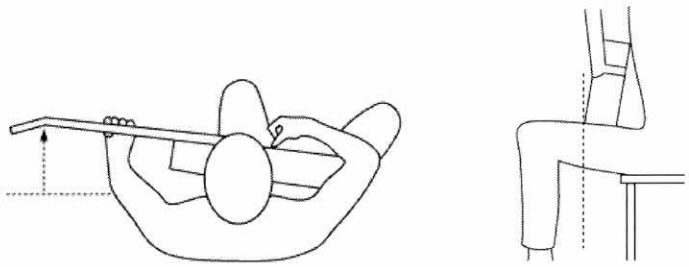
  1. **the left thigh**—the most stable of the contact points (guitar-support slips notwithstanding)
  2. **the right thigh**—the rear edge of the guitar rests against the inside of the thigh
  3. **middle right-side of the chest**—the top-left rear edge of the guitar rests against the center-right side of the chest; the back surface of the guitar does not contact the body (to avoid reducing projection and resonance)
  4. **the right forearm** rests on the top-right forward edge of the guitar, avoiding contact with the face of the guitar
  5. while **the left-hand thumb and fingers** and make constant fleeting contacts with the guitar neck and fingerboard, they don't contribute in any way to supporting the instrument

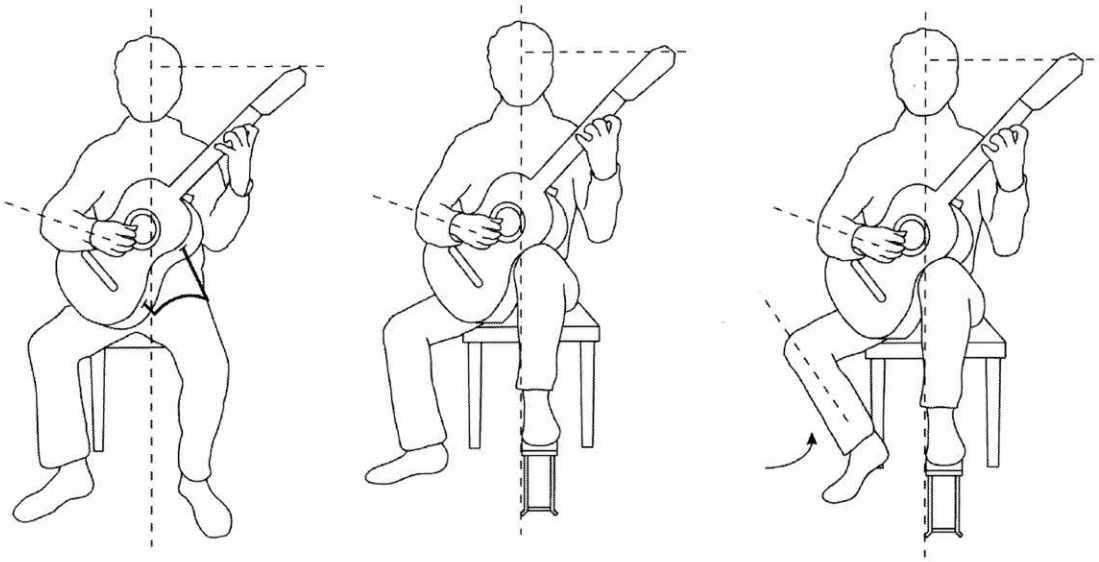
- The position of the guitar can be adjusted in the following ways, each of which has an effect on the optimal functioning of the two hands (see Notes):

  1. **the headstock** should be relatively high
  2. **the headstock** should be somewhat forward
  3. **the guitar** should be tilted slightly backwards, towards the ceiling
  4. **the guitar** should be positioned somewhat to the player's right (by placing the left leg centrally instead of out to the left)

  Avoid turning, twisting, or leaning to accommodate the guitar and keep the shoulders level and relaxed.

  Refer to the following illustrations:



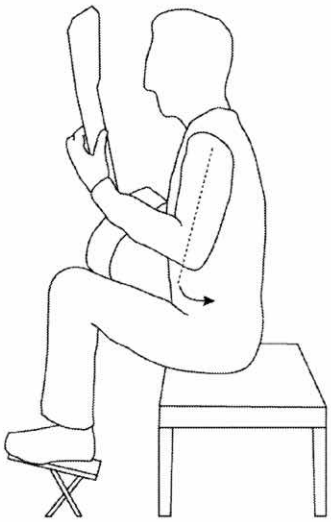


Positioning the Left Arm

The left arm is positioned in such a way that it can be held in position with minimal effort (and also to allow the contribution of gravity in certain playing situations)—high and a little forward of the perpendicular, which involves a slight forward angle from the shoulder:

- begin with your left arm hanging by your side
- gently raise it until a stable position is reached, rotating the forearm and bending mainly at the elbow and a little at the shoulder
- the hand should be somewhere around shoulder-height
- the shoulders are level and relaxed

(Further positioning of the hand, fingers, and thumb is explored in detail in later lessons.)



Positioning the Right Arm

The right arm is positioned so as to require the least effort to hold it in position while bringing the hand into an appropriate position relative to the strings (at an oblique angle around the edge of the soundhole).

- begin with your right arm hanging down by your side, palm facing backwards
- gently raise the arm by bending at the elbow and somewhat outwards and forwards at the shoulder
- rest the underside of the forearm, at a point a few inches in from the elbow joint, on the top-front edge of the guitar, avoiding the face of the guitar, and in such a way that the fingertips are positioned over and close to the strings
- the shoulders are level and relaxed

(Right-hand positioning is explored in detail in later lessons.)

Seating Ritual

Adjusting an already established sitting position can at first feel uncomfortable, or at least unfamiliar. Experimentation with the parameters discussed here will however lead in a short time to an optimized position that becomes completely natural.

Use the same chair and adopt a 'seating ritual' that you go through each time you sit down to practice with the instrument. This will not only bring familiarity with the various aspects of the sitting position, it will also provide a consistent and effective foundation upon which all further aspects of your playing technique will be built.

Use the following positioning checklists to help develop your ritual:

Sitting	**Guitar Position**
• sit-up straight, towards the front edge of the chair; shoulders relaxed and level • the left leg points straight forward (whether using a guitar support or footstool) • the right leg is out to the right with the foot flat on the floor and in line with the left foot (or balanced on the ball of the foot if a steeper angle of the guitar neck is needed) • the footstool (if used) is centered and high	• the headstock is high and forward • the guitar neck is at a relatively steep angle • the soundhole is centered (or even slightly to the right) • the guitar is tilted somewhat backwards toward the ceiling • the torso doesn't turn, twist, or lean to accommodate the guitar • the shoulders are level and relaxed
Left-Arm	**Right-Arm**
• the hand at or around shoulder height • the elbow somewhat forward of the perpendicular • the arm isn't held out to the player's left • the shoulders are level and relaxed	• the forearm rests on the front *edge* of the guitar's upper bout • the shoulders are level and relaxed

NOTES

The principal guiding factor in determining an optimal playing position is that the guitar is accommodated to the body, rather than the other way around. This means that the guitar is positioned relative to a relaxed, balanced sitting position, and in such a way that the arms and hands may be used in an equitable and effective way taking into account both anatomical efficiency and the role of gravity.

Sitting For the majority of players, a relatively lower chair helps increase the height and angle of the guitar neck, which allows for optimal positioning and use of the left hand and arm.

Guitar Support or Footstool? The caveat regarding guitar supports is that the device must allow the guitar neck to be positioned high enough to meet an appropriately-positioned left hand (tall players may need to use a combination of a guitar support and a low footstool to accomplish this).

Centering the footstool relative to the player positions the guitar desirably somewhat to the player's right (more on this later). Pointing the footstool straight forward (or even turned in slightly to the player's right) helps keep the left leg pointing straight forward rather than falling out to the left, away from the body. A high footstool setting brings the guitar neck to meet an appropriately-positioned left hand (see later).

Positioning the Guitar Many players use an arm support attached to the upper bout of the guitar to prevent the arm from making contact with the soundboard and damping its vibrations.

A piece of black Grip Shelf Liner can be used to help guarantee a stable contact between the guitar and the left thigh.

Seating in Performance Situations
Since we're at the mercy of the seating options provided for us in performance situations, reproducing an optimal sitting position can be challenging (so much so that some performers even travel with a foldable performance chair). It's therefore important to know ahead of time the height of chair we require. Determine the height of your ideal practice chair by standing next to it and measuring it against your leg or against your guitar placed upright against it and use this measurement to gauge the suitability of the seating options available to you at the venue. Adjustable piano benches usually provide the best option, though orchestral 'cello' chairs, which are lower than standard orchestral chairs, also usually work well for guitarists.

1) *The headstock can be raised or lowered*—a relatively steep angle of the guitar neck also reduces the amount of left-forearm rotation needed for parallel and hyper-parallel playing positions, which would otherwise be close to the physical limits of the arm's range of movement (this is explored in more detail in a later lesson). The lower the guitar neck, the larger the angle at the elbow, the further the hand is from the shoulder, and the greater the effort required to hold the arm in position; in addition, the left hand cannot take advantage of gravity (weight) to assist in certain aspects of playing.

2) *The headstock can be pulled backwards or pushed forwards*—a forward position of the left arm allows a component of arm weight to contribute to certain aspects of playing, removes any need to twist the body, and is also favorable for the right hand (since the strings are brought further toward the desirable left side of the nail).

3) *The guitar can be tilted towards the floor or towards the ceiling*—tilting the guitar backwards a little enhances the ability of the left arm to project weight into the fingerboard and allows the player to see the fingerboard without leaning forward.

4) *The guitar can be positioned to the player's right or left*—positioning the guitar towards the right places the lower frets in the vicinity of a naturally-raised left hand and places the right hand in a desirable position around the edge of the soundhole .

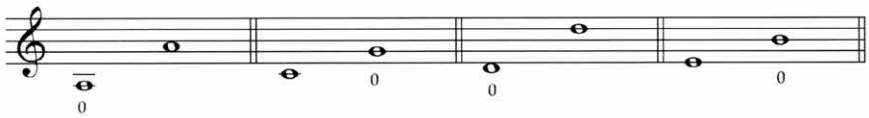
Positioning the Left-Arm With the hand relatively high and a little forward, gravity exerts a pull on the arm both downward and inward toward the player and the instrument as the elbow attempts to return to a position directly beneath the shoulder. This is a sophisticated topic that addressed more fully in a later lesson.

Tuning

test intervals

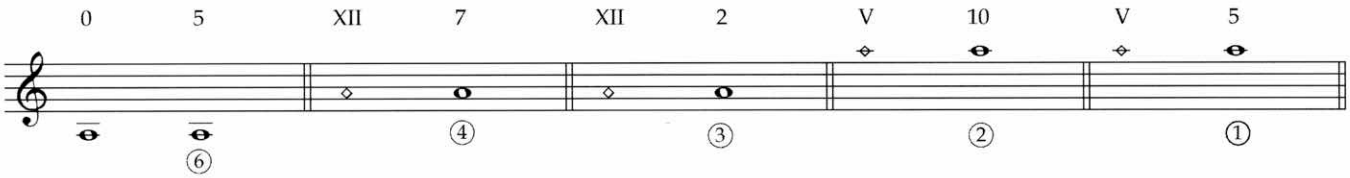
While digital tuners take much of the work out of getting our instrument in tune, it's still important to develop the ability to fine-tune by ear. A digital tuner can get us very close to an optimal tuning of the open strings, but this tuning often needs to be refined by the player to provide the subtle compromises required to get an instrument optimally tuned.

- Once the open strings are tuned, use the following test intervals to further compensate the tuning:



When comparing strings ⑤ and ③ and strings ④ and ② you will likely discover that either the fifth sounds a little flat or the octave a little sharp. Adjust the tuning of the upper string so that both intervals between each pair of strings is tolerable.

- The following test intervals are also useful; various A-pitches generated on string ⑤ are compared with fretted A-pitches on the remaining strings:



Further issues relating to fine tuning, including biased tunings for specific tonalities, scordatura, and tuning in performance are explored in Appendix 2.

> During periods of heavy practice it can helpful to tune a little under pitch (perhaps by a quarter-tone).

The Right Hand

The Right Hand—Introduction

The right-hand lessons in this first part of *Classical Guitar Technique* deal with the basic movement forms required to develop advanced techniques such as refined tone production, cross-string ornaments, advanced tremolos, and fast alternation (all of which are reserved for Part 2).

The sequence of topics presents a gradual elaboration of the fundamental right-hand position: following the initial goal of establishing an anatomically-sound position with the fingers moving as an homogenous unit, further right-hand actions—which may be considered elaborations of this default position—are developed systematically.

The broad sequence and goals are as follows:

1 Hand Position and Plucking Action (Lessons 1-4)

a) establishing an anatomically-sound hand position; the role of the forearm
b) developing appropriate shapes and lengths of the fingernails
c) establishing an anatomically-sound plucking action of the fingers together, in pairs, and individually, supported by the thumb (with particular attention to the ring finger)
d) establishing an independent thumb stroke
e) developing a balanced and equitable simultaneous use of the thumb and fingers

2 Refinement of the Basic Stroke (Lesson 5)

a) control of the tension levels associated with the various phases of the stroke (preparation, plucking, follow through, and return)
b) refinement of the preparation phase: preparing on the string and preparing close to the string
c) refinement of the return: controlled legato-return

3 Arpeggio Technique (Lessons 6-8)

a) fingers-only patterns supported by the thumb
b) internalizing, refining, and increasing velocity
c) the common thumb-finger patterns
d) the compound stroke (**ma—am** at speed) and the circular arpeggio (**pimami**)

4 Single-String Alternation and String Crossing (Lessons 9-11)

a) modifications to the hand position and the role of the forearm
b) developing **im—mi** automatic alternation
c) string crossing and the role of the forearm
d) correcting awkward string crossings

e) simultaneous use of the thumb and fingers
f) developing alternation speed

5 Tremolo (Lesson 12)

a) hand position
b) **am** compound stroke
c) **ami—amip—pami** at speed

6 Rest Stroke (Lesson 13)

a) rest stroke with the fingers
b) single-finger string crossings
c) free-stroke / rest-stroke mixture

7 Introductory Rasgueado Exercises (Lesson 14)

a) single-finger strumming
b) basic **cami** rasgueado

Be sure to explore and understand the text, exercises, and practice methods presented in each lesson before adopting the Practice Routines and Contextualization material. Take patterns and exercises out of the full technical practice sequence as they become comfortable and maintain them as simple play-throughs as you continue work on the remaining patterns and exercises with the full range of practice methods provided in the lesson. Once the material in a lesson is comfortable, use the suggested Contextualization material to periodically revisit the technique.

Practice Grids are provided in Appendix 3 to help track your progress.

If an exercise or lesson remains uncomfortable after a few weeks of practice, make a note of it on the Practice Grid and move on. You can revisit it at a later time.

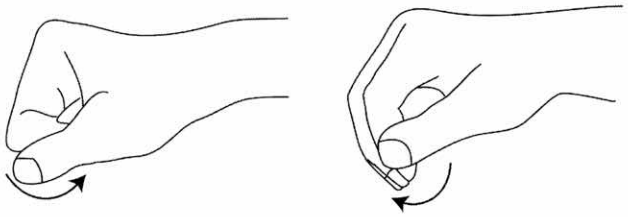
Lesson 1—The Basic Right-Hand Position

forming an anatomically-sound right-hand playing position · balancing the thumb and fingers—the role of the forearm

The goal of this lesson is to establish an anatomically-sound right-hand playing position that works equally well for the thumb and the fingers. This basic position will form the foundation from which the constant subtle positioning adjustments needed for the varying technical actions of the right hand can depart and return.

Forming the Basic Playing Position

Make a fist with the fingertips aimed toward the back of the palm, then relax it out with the fingers remaining gently curled in all of their joints. Adjacent fingers will be lightly touching one another at their tips with the feeling that they form a single unit:

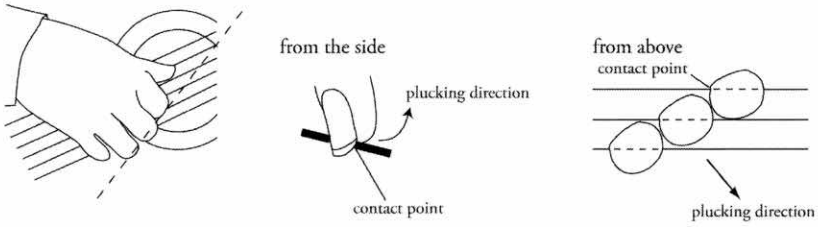


1. place the loose fist over the strings but *without* placing the forearm on the guitar
2. place the fingers one per string at a point around the edge of the sound hole (**amip** on strings ①, ②, ③ and ⑤)
3. place the forearm on the upper bout of the guitar

Checklist
1) the fingers are curled in all of their joints and (ideally) are lightly touching one another at the tips
2) the wrist isn't bent to one side or the other and is only gently arched
3) the shoulders are relaxed

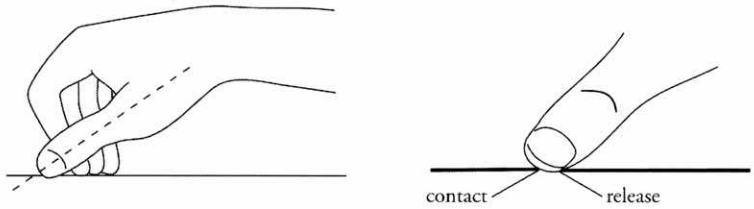
Position of the Fingers Relative to the Strings

The fingers approach the strings at an angle, contacting them on the left side of the fingernails, and crossing them at an angle when plucking (moving directly towards the elbow):



Position of the Thumb Relative to the Strings

The thumb also approaches the strings at an angle, but with a contact point toward the center of the nail and a release point toward the corner:



Balancing the Thumb and Fingers —the Forearm

A number of *subtle* adjustments are needed to develop a playing position that accommodates a satisfactory nail placement and playing action of the thumb and the fingers together. These involve:

1) the contact point of the forearm on the upper bout of the guitar
2) rotation of the forearm

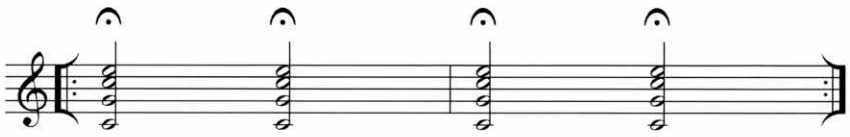
Forearm Contact Point (Thumb Angle and Wrist Arch)
Moving the forearm contact point a little closer to the elbow brings more thumbnail onto the string, enhancing sonority (this also increases the arch of the wrist a little and brings the fingers a little beneath their strings).

Forearm Rotation (Finger and Thumbnail Contact Points)
Subtle rotation of the forearm alters the 'tilt' of the hand and adjusts the contact points between the fingernails and the strings.

Clockwise rotation generally favors the fingers; counter-clockwise rotation favors the thumb.

Since the fingers and the thumb benefit from differing forearm contact points and directions of rotation, experimentation is needed to find a position which allows the fingers and the thumb to play with equal facility and sonority. A small increase in wrist arch and a subtle clockwise rotation of the forearm is usually required

For now, use an open-string block chord to explore these adjustments (prepare the fingers on the strings before plucking each chord):



Remember, these are *subtle* deviations from the basic anatomically-strong position (future lessons explore these adjustments in more detail).

NOTES

The basic right-hand playing position is modeled after a loose fist, which guarantees that all of the joints from the wrist through each finger joint are anatomically aligned. (*Anatomical alignment* doesn't imply *geometrical* alignment; rather, it signifies that the various joints are positioned in an optimal manner for controlled movement to occur.)

The position of the forearm (contact point on the upper bout of the guitar and rotation) is critical to right-hand positioning (as well as other aspects of playing).

Subtle adjustments to the forearm contact point are required for several aspects of right-hand technique and are addressed in various lessons throughout this book.

A subtle clockwise rotation of the forearm moves the contact points a little further along the fingernails but can also increase the amount of nail that moves through the string (provided an oblique angle of attack is maintained). However, this also moves the contact point away from the center of the thumbnail and reduces the contribution of the arm to the sonority of the thumb (methods of compensating for this are explored later, in Lesson 4).

Counter-clockwise rotation brings more of the thumbnail into play, but less of the fingernails. Since the arm is already close to its limit of rotation, any further rotation in this direction can interfere with the facility of the fingers (subtle rotation in the opposite direction, on the other hand, can increase the facility of fingers).

Forearm adjustments made to balance the fingers and thumb can also be used to temporarily favor the thumb or one or more fingers when a musical texture requires it. This issue is explored in Part 2 in the section on Refinement of Sound.

Lesson 2—The Fingernails

factors relating to the length and shape of the fingernails · filing methods for consistency and reproducibility of shape and length · problem nails

To obtain the maximum range of dynamic and tone color, as well as ease of plucking action, we need to pay careful attention to the length, shape, and condition of the fingernails.

Nail shape and length very much depend on personal factors, such as the relative lengths of the fingers and thumb, the aesthetic quality of sound desired, and the individual fingernails themselves. It isn't possible to describe a definitive nail shape that will work equally well for everyone (or, for that matter, for each finger). Still, it's certainly possible to provide guidelines and nail-shaping methods that can help develop and refine appropriate nail lengths and shapes regardless of individual physiology.

Shape and Length

Nail shape and length are influenced by the following considerations:

- the nails are shaped to suit the position and angles of attack of the fingers—the fingers shouldn't compromise their movements or position to accommodate an inappropriately-shaped nail.
- the initial contact with the string is made with the fingernail and the fingertip simultaneously
- the trajectory of the string as it slides along and then off the nail—if too steep, the nail will catch on the string; if too shallow, the sound will lack body
- long fingernails can be difficult to get through the string without compromising the finger movement; too short a nail can lack body
- fine control of tone and dynamic requires very precise finger placement—something not promoted by inappropriately long fingernails.

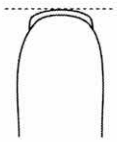
The Shaping Process

Experimentation with various approaches to nail shape (angled ramps, varied curvatures, etc.) can be a very time-consuming process, and even when a particular shape seems to work well the problem remains of accurately reproducing it each time the nails are shaped.

The following method removes much of the high degree of conceptualization, not to mention guesswork and the problem of consistent reproduction, that might otherwise result.

1 As a Starting Point

Shape the nails in a gentle curve that follows the contour of the fingertips:



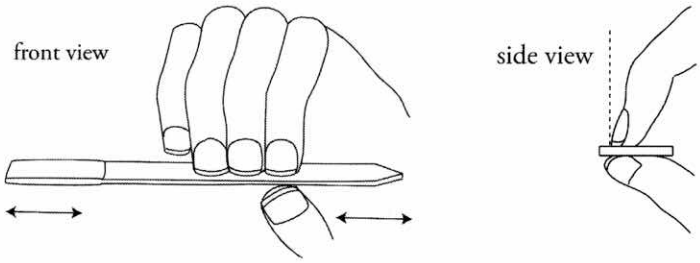
Note that:

- the nail is relatively short, as viewed with the palm of the hand facing the player
- the curvature of the nail is quite shallow
- the corners of the nail have been rounded-off but not filed down too low or too steeply

After smoothing and polishing, this shape should guarantee that the fingernail moves through the string quite effortlessly. However, it will likely not produce a full range of tone color and dynamic, nor consistency of tone and dynamic from finger to finger in the varying technical situations encountered in actual pieces of music. Still, it's a reasonable starting point, especially for players who are developing or revisiting the basic right-hand movement forms.

2 Using the Nail File as a Template

A much more tailor-made shape for each fingernail can be achieved by using the flat plane of a nail file to simulate the contact made by the fingernails with the strings during the various phases of plucking.



Place the **i**, **m** and **a** fingers on the file in playing position and file them together as a unit:

Filing alternates back and forth between two types of shaping:

1. The nails and fingertips are placed in contact with the filing surface together at an angle of approximately 75° (too steep an angle will produce a nail length that's too short; too shallow an angle will produce a nail length that's too long).

2. The filing surface is placed beneath the nails, between the nails and the fingertips, to create a perfectly flat plane along the underneath surface of the nails.

Using these filing techniques in alternation (a few sweeps at a time) gradually reduces areas of the nails that would otherwise remain if only a single shaping method was used.

Finally, gently round-off the corners that remain.

Shape the thumbnail separately using a similar method . A somewhat ramped shape will probably result—if this shape doesn't work well you may wish to round-off the ramp to create a more curved shape.

As you work with this method you'll find that each fingernail takes on its own length and shape, which may differ significantly from finger to finger. (Many players find, for example, that the **i** fingernail tends to be the shortest while the **a** fingernail tends to be somewhat longer.)

> It's important to use a fine particle-type file or a glass file, rather than a serrated metal file or an emery board—a filing surface that's too coarse or blunt will 'rip' rather than cut the nail, making it difficult to bring the nail edge to a fine polished finish.

In addition, as you work with this method over a period of several days, weeks, and practice sessions, you will find that the resulting shapes and lengths of the fingernails evolve as the superfluous areas of each nail are gradually removed while other areas of the nail continue to grow.

Polishing

Once you've developed a nail shape that works it's important to be able to accurately reproduce it, not least to maintain consistency in day-to-day playing. It's therefore important to develop a consistent method of fingernail shaping and to shape the fingernails fairly often, perhaps every two or three days.

After filing, the fingernails must be polished to a super-smooth finish with fine-grade auto Wet or Dry finishing paper (or something similar). Experiment to find the grade of paper that works best for your particular nails. 1000 to 2000 'grit' is a reasonable range of grades to experiment with (though finer grades are available).

It's also a good idea to make a few passes using increasingly finer grades of paper. Graduated nail buffers also work well, when fine enough, and several online stores offer specialized nail-kits designed specifically for guitarists.

> Finishing paper that's a little too coarse can be made less abrasive by rubbing it against itself.

Problem Nails

Since fingernails can vary tremendously from person to person, further steps sometimes need to be taken to achieve a satisfactory sound.

Weak, Thin Fingernails can be reinforced by applying a little nail hardener (or Super Glue) to the upper surface of the nail, especially to the leading corner (leave a small area of nail leading up to the nail edge free from added material) or by applying layers of silk-wrap and glue (available in kits from supermarkets).

Unusually Distorted Nails can sometimes be modified by running a pair of metal spoons under hot water and then slotting the nail between them; the modified shape can be set in place with nail hardener, Super Glue, or silk-wrap and glue.

Artificial Nails—if all else fails: one method, used by many concert players, consists of cutting a crescent-shaped segment from a ping-pong ball, gluing it to the underside of the fingernail, and shaping it as one would shape a regular fingernail. Silk-wrap and glue can be added to the upper surface for additional strength. Online stores sell similarly-designed artificial nails specifically marketed to guitarists (some of which are designed to be easily detachable following playing).

Nail-moisturizing and strengthening lotions are also widely available and are worth using regardless of individual nail health (the massaging process alone helps stimulate nail growth and increases nail strength and flexibility).

Since the thumb plays primarily on the wound strings, avoid wear and tear on the thumbnail during daily practice by taping the edge of the nail, placing the tape underneath the nail edge and wrapping it over onto the upper surface of the nail. (Not all tapes work equally well, however; I find that the yellowish transparent polypropylene 3M transparent tape sounds best!—brown 'packing tape' can also work well).

NOTES

Personal physiology and aesthetic preferences help explain the quite widely-varying nail lengths and nail shapes employed by professional guitarists.

Nail Shape and Length

A nail-first contact with the string can result in a click as the nail contacts the string (and a 'sizzle' if the string is already sounding). Initial contact with the fingertip alone, on the other hand, can result in a discontinuity in the stroke as the string moves off the fingertip and onto the nail.

If the trajectory is too steep, the finger movement will likely be compromised to get the nail through the string. A shallow trajectory and the resulting ease of the stroke may well promote a faster stroke and general right-hand speed, though at the expense of sonority. The same is true of long nails versus short ones. Fine control of tone and dynamic requires *very* precise finger placement (something not promoted by inappropriately long fingernails). There's a balance to be struck between ease of finger action on the one hand and accuracy and quality of sound on the other. Each player must experiment to discover the precise nail lengths and shapes that work best for them. In the interest of developing a precise finger placement, relatively shorter nails are to be preferred, at least initially.

If the amount of nail that the string has to slide along is too great, it can be helpful to reduce the nail length at the opposite corner of the nail to create a release point a little closer to the center of the nail.

It can be difficult to conceptualize how a particular nail shape interacts with a string, bearing in mind that no matter from which angle we view the nail (from the side, from in front, from the back, from the end), some degree of three-dimensional curved surface—not to mention inconsistency of curvature—is involved.

Polishing

As well as the harsh and scratchy sound that results, imperfectly-polished fingernails create scratches in the treble strings and these scratches, in turn, further roughen the fingernails.

Slide a fingernail along a treble-string—you'll hear any scratches that are present in the string. It's possible to loosen a scratched treble string and twist it at the nut to turn the scratches away from the fingernails.

Nail composition can vary significantly from person to person—the finest grades of finishing paper may not have much effect on particularly hard fingernails; coarser grades, on the other hand, may not be smooth enough to polish softer nails and might even alter the overall shape of the nail.

Problem Nails

Avoid false nails that cover the entire nail bed with adhesive material (this deprives the underlying nail of oxygen, weakening it further).

Nail health is of course very much dependent upon a person's general health, diet, and nutrition. Numerous web sites provide comprehensive discussions concerning nutritional requirements for general nail health.

Lesson 3—The Basic Plucking Action

the non-independent finger group **ma(c)** · prepared fingers-only block chords · contact points, · joint activation and direction of finger movement · individual fingers, finger pairs and independence · developing the ring finger · incorporating the little finger · free stroke or rest stroke? (see Notes)

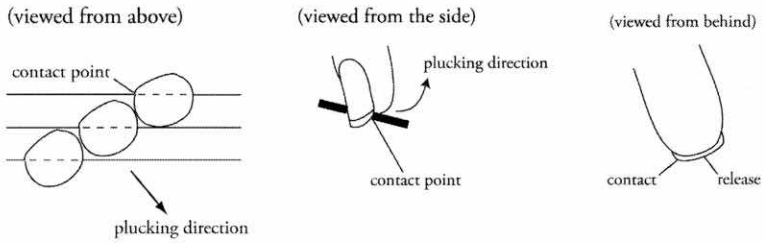
In this lesson we'll explore the basic plucking action of the fingers (together, in pairs, and individually) with the goal of establishing precise contact points and uniform activation and movement of the finger joints. We'll also look at basic finger independence, initial development of the less-independent ring finger, and the inclusion of the little finger.

The Non-Independent Finger Group

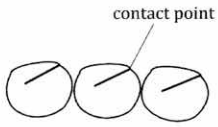
The **m**, **a** and **c** fingers are influenced by the movements of one another and tend to move together. No attempt should be made to *unnecessarily* prevent this from occurring and when the **m** or **a** finger is required to make a movement the remaining finger of the pair should be allowed to move with it (the **c** finger should move as well, especially when the **a** finger plays).

Prepared Fingers-Only Block Chords

- Establish the normal hand position (a relaxed fist) and prepare the left-hand corners of the fingernails on the strings (**ami** on strings ①, ② and ③). Rest the thumb on string ⑤ for support.



- Squeeze the strings a few times and examine the grooves created in the fingertips: if the hand position is correct and the nails are shaped appropriately, these grooves will form an angle relative to each fingernail, converging with the corner of the fingernail at the contact point with the string (as seen with the fingertips facing the player):



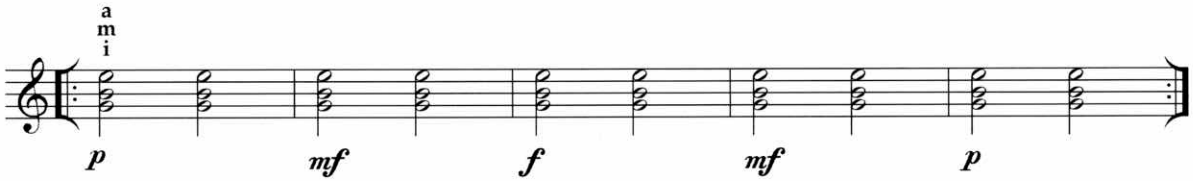
- Prepare the fingers on the strings again and, to begin with, use a slow plucking action at a low dynamic level, moving the fingers all the way into the palm of the hand, into an actual fist.

Don't allow the tip joints to collapse in the opposite direction to the stroke (*hyperextend*). Also make sure that the movement comes directly from the fingers and that the hand as a whole barely moves during the stroke (for now).

- When comfortable, moderate the plucking action so that the fingers move in toward the palm of the hand but don't go nearly as far as to actually make contact with it. (This is the normal way of playing.)

  Alternate between the two versions, making sure that all finger joints move inwards during the stroke.

- Experiment with the speed of the movement and the firmness of the fingers to produce the following dynamic levels (**Ex. 1**):



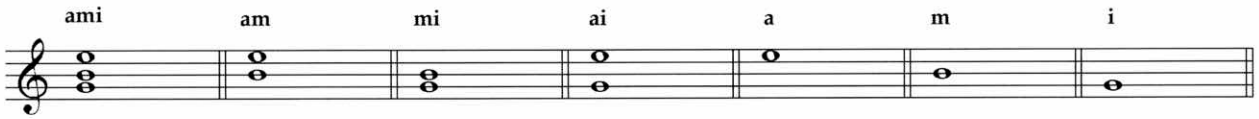
Finger Pairs and Individual Fingers

For the next exercise, prepare only the *playing* fingers on their respective strings but move *all* fingers into the palm of the hand as part of the plucking action.

- Initially, bring the fingers all the way into the palm of the hand and then moderate the movement so that the fingers come to rest at a natural position just inside the hand.

- Experiment with slow movements at a soft dynamic level and quicker, more firm movements with correspondingly louder dynamics.

- Practice the following finger combinations (**Ex. 2**):



Checklist

- the thumb rests on string ⑤ throughout
- the plucking action comes from the fingers alone (the hand doesn't move significantly)
- all of the finger joints move in toward the palm (movement at the main knuckle and the middle joints is particularly noticeable, movement of the tip joints less so)
- the sensation in the hand should feel essentially the same for each finger combination

Developing Finger Independence

- Using the same finger combinations, prepare *all* of the fingers on their strings but leave the non-playing fingers in place while the playing fingers move into the hand.

  A small amount of tension will be experienced in the non-playing finger(s) as the other fingers pluck (especially in the **m** and **a** fingers); release this immediately after plucking.

While this exercise will likely take some practice, it's a useful initial step toward exploring and developing finger independence.

*Developing the Ring Finger (**a**)*

- Spend a little warm-up time repeatedly plucking the first string with the **a** finger and plucking strings ① and ② simultaneously with the **a** finger.
- Practice single-line melodies, or even an arpeggio pattern using the **a** finger only.

*Incorporating the Little Finger (**c**)*

Add the **c** finger to the exercises above (adjusting the string assignments).

For most players, simultaneous use of this finger will require that the other fingers adopt a slightly more curled attitude to bring it into a playable position.

NOTES

The Non-Independent Finger Group
While playing the guitar requires a high degree of both coordinated and independent movement of the fingers of both hands, not all of the fingers within a hand are truly independent of one another—specifically, **m**, **a** and **c** are interdependent. These fingers should be allowed to move together whenever possible. Opposing these movements requires tension be introduced into the non-playing fingers to hold them in place while the playing finger makes its movement—this is detrimental to finger independence, coordination, and general facility. On the other hand, there are, plenty of occasions when the non-independent **ma** finger pair must play in alternation with one another. A technique used to accomplish this—the Compound Stroke—is explored in Lesson 8.

Plucking With the Fingers Together (Block Chords)
One of the most important aspects of right-hand technique is the development of precise and consistent contact points at which the fingernails and fingertips engage the strings.

Resting the thumb on string ⑤ not only provides balance and support for the hand, it also helps the fingers to adopt a plucking action that will also accommodate the thumb.

As an exercise, exaggerated movement of the fingers all the way into the palm guarantees that they move correctly in all of their joints. It's especially important that a good amount of inward movement occurs at the main knuckle joints. The middle joints also move inwards, as do the tip joints (though much less noticeably so). *Hyperextension* (bending back) of the tip -joints and movement of the hand and arm, which have valid functions in advanced playing, should be avoided at the preliminary stages of stroke development.

Finger Pairs and Individual Fingers
As a preliminary exercise, moving the non-playing fingers together with the plucking fingers promotes a feeling of unified movement and reduces the potential for unnecessary tension in the non-playing fingers.

Developing the Ring Finger
The **a** finger has neither the agility nor the independence of the **i** and **m** fingers, yet it's so often the finger called upon to play melodic notes on the first string (something that requires fine control over both tone and dynamic). A couple of minutes spent on this finger during the daily warm-up is invaluable for increasing its sensitivity and control.

Incorporating the Little Finger
Though few players currently use the little finger, at least in normal playing, good reasons nevertheless exist for incorporating it into our practice: 1) control developed over the little finger translates into increased control of the adjacent **a** finger; 2) there are occasional musical situations in which the little finger is useful (five-note block chords, for example).

The little finger can be added to any of the exercises presented so far, as well as to those presented in the following lessons. (Shape the little-finger nail independently to avoid compromising the shape and lengths of the other fingernails.)

American guitarists Charles Postlewaite and Leonhard Beck have written several books dealing with the extended use of the little finger (published Mel Bay Publications); several published compositions by Czech guitarist Stepan Rak and arrangements by Japanese virtuoso Kazuhito Yamashita also make significant use of this finger.

Rest Stroke or Free Stroke?
A *free stroke* is an anatomically sound way of plucking in which naturally curled fingers move into the palm of the hand after playing; a *rest stroke* is a secondary technique in which a straighter finger moves through the string in a direction that brings it to rest directly against the next lowest string after plucking.

Recent decades have seen performers move away from the rest stroke and return to the free stroke as the basic mode of tone production, technique, and hand position. While this, for some teachers, remains a controversial pedagogical issue, a free-stroke-*first* technique offers significant advantages over one based initially on rest stroke:

- modeled after a natural grasping, fist-like finger curvature, the **free stroke** is the fundamental right-hand plucking action from which other modes of plucking are derived
- using a significantly straighter finger, the **rest stroke** does not closely model a natural function of the hand and should therefore be regarded as a secondary technique used for certain dynamic and timbral effects
- the majority of musical textures (block chords, arpeggios, counterpoint, accompaniments, etc.) are necessarily performed free stroke, especially in fast or otherwise complex passages
- all of our historical music, from the Renaissance through the mid-nineteenth century, along with much recent music, was written for a free-stroke technique and sound concept
- while, initially, it's undoubtedly easier to produce a full sound with a rest stroke than with a free stroke, students who first learn to play with a rest-stroke technique and hand position often subsequently find it difficult to develop a fluid arpeggio technique and a strong melodic free stroke
- it's much easier to develop a rest-stroke technique from an already established free-stroke hand position than the reverse

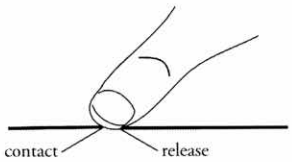
Rest-stroke technique is explored in detail in later lessons.

Lesson 4—The Thumb

solo thumb stroke · thumb and fingers together—a necessary compromise

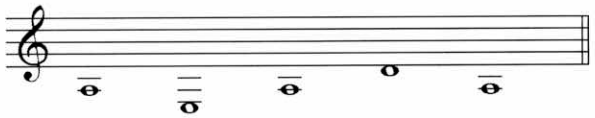
Solo Thumb Stroke

The plucking action of the thumb differs from that of the fingers in that the initial contact point normally occurs between the string and the *center* of the thumbnail with the release-point toward the corner of the nail. The thumb then usually comes to rest against the tip joint of the **i** finger (at least when playing forcefully).

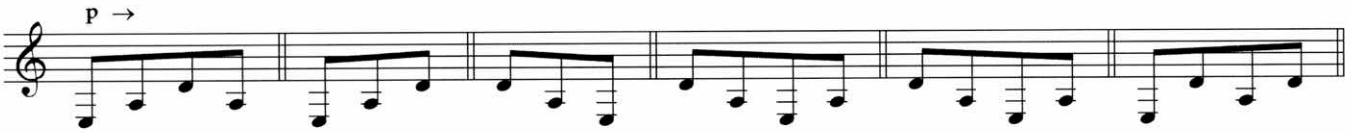


The plucking action normally comes solely from the base joint (at the wrist), although the tip and middle joints may also activate when playing block chords together with the fingers (see the next section). Much depends on individual physiology.

- Prepare the thumb on string ⑤ (which we'll regard as its default position) with the fingers resting on their respective strings.
- Begin with slow movements at a soft dynamic level and then contrast this with quicker, more direct movements and louder dynamics.
- Experiment with the position of the forearm (contact point and rotation) and note how this affects the initial contact point between the thumbnail and the string. Some positions of the forearm promote a simple movement from the thumb's base, others encourage flexing of the tip and middle joints (as well or even instead of).
- Explore the three bass-strings, in the following order (again, with the idea that string ⑤ is the default position):



- Explore the following thumb-only arpeggio patterns:



Thumb and Fingers Together

When plucking with the thumb and fingers simultaneously, we no longer have the assistance of one or the other to balance and support the hand during the plucking action. Nevertheless, the hand must remain still during the stroke with the plucking action coming from the fingers and thumb only, at least for basic playing. (A slight movement is almost inevitable, but the hand shouldn't bounce or move away from the

strings, nor become tense or rigid.)

- Establish the hand position with **pima** prepared on their respective strings. Then, without moving the hand itself, pluck the strings, closing the fingers into a fist

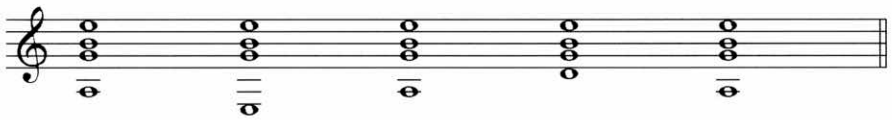
- Again, once this feels comfortable, moderate the movement so that the fingers come to rest inside the hand and the thumb comes to rest against the **i** finger (the little finger should move with the other fingers).

At this point, experiment with subtle adjustments to the forearm (its contact point on the upper bout of the guitar and its degree of rotation) and with the thumb stroke moving from the base joint only and from the tip and middle joints (as well or instead).

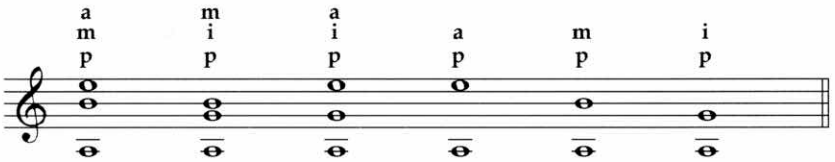
A further way to explore the simultaneous use of the thumb and fingers is to aim the thumb stroke at varying points on the index finger, adjusting the forearm contact-point and employing tip-joint activation as needed. Explore the following:

1) coming to rest against the side of the **i** finger
2) coming to rest against the back of the **i** finger
3) coming to rest against the underneath of the **i** fingertip

- Explore assignments for the thumb on all three bass-strings, again with string ⑤ as the home position. Begin with slow movements at a soft dynamic level before moving on to quicker, more direct movements and louder dynamics (**Ex. 1**):

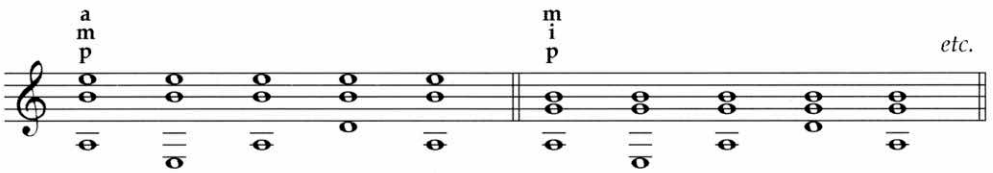


Once the basic **pima** block-chord movement is established, practice the thumb with finger pairs and with individual fingers to explore the various configurations that crop-up regularly in actual playing situations (**Ex. 2**):



(Prepare only the plucking fingers on their strings but move all of the fingers into the hand for this exercise.)

- Explore each combination with the thumb assigned to each of the three bass-strings, for example (**Ex. 3**):

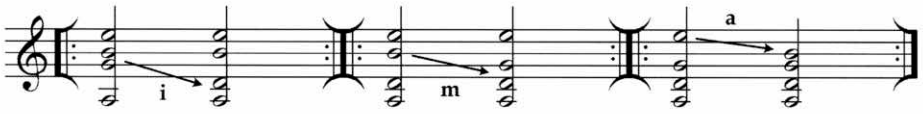


Bear the following in mind:

- The strings should sound simultaneously—this results from the fingers moving as a single unit at the same speed and with the same initial impulse and tension level.

- The chord voicing should be balanced (all of the notes should be audible)— again, this results from the fingers moving as a single unit at the same speed and with the same initial impulse and tension level. The volume and sound quality of the thumb is enhanced by the thumbnail making a sufficient angle with its string.

- Explore the following method of accessing individual fingers within a block chord:



(Block-Chord Voicing is explored more fully in Part 2.)

NOTES

The fingers rest on their strings not only to provide support but also to promote a hand position that works equally well for both the thumb and the fingers.

Thumb and Fingers Together
Simultaneous use of the thumb and fingers amounts to something of a balancing act, especially regarding hand position. For most players, the thumb will adopt a slightly different hand position when playing alone. However, in situations where the thumb plays simultaneously with the fingers it must adapt to a hand position that accommodates the fingers as well. For many players, depending on the relative length of the thumb, it's necessary to use movement of the tip and middle joints instead of (and perhaps together with) movement at the base joint. It may also be necessary to experiment with a subtle repositioning of the forearm contact-point with the guitar and its degree of rotation in order to find a hand position that accommodates the fingers and the thumb equally well. Since thumb physiology varies so widely, it's impossible to provide a definitive description of how the thumb should work for everyone, especially in conjunction with the fingers. Each player must experiment to discover the formula that works best for them.

Lesson 5—Refining the Basic Stroke

exploring and controlling tension levels · refinement of stroke preparation and the 'ready to play' state · plucking and follow through—dynamics and tension levels · returning to the strings—*relax-return* versus *controlled return* · preparing close to the strings—*legato return* · consistency or sound

The exercises presented so far have aimed to develop a quick, direct plucking action that takes the fingers well inside the hand to promote equal activation of the three finger joints. In this lesson we'll explore the stroke in more detail, considering tension levels and the three phases of the stroke: Preparation, Moving Through the Strings and Follow Through, and Returning to the Strings.

Defining Tension Levels

The relative tension levels associated with the various phases of the stroke are as follows:

- *preparation*—(for now) just enough tension to hold the fingers in position in a state of readiness for movement—whether on the strings or close to them
- *plucking*—a brief impulse that creates the plucking action and which is almost instantaneously released during the follow-through
- *following through into the hand*—simply an after-effect of the plucking impulse
- *fingers held inside the hand*—just enough tension to prevent the fingers from relaxing back to the strings
- *returning to the strings*—this can be a simple relaxation that allows the fingers to return in front of the strings or a more refined movement that returns the fingers to the strings in a more carefully-timed way (avoid returning the fingers unnecessarily early or quickly—see Notes)

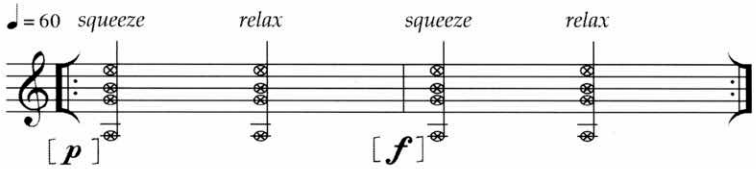
Preparing the Stroke

While a certain amount of tension is needed to simply hold the fingers in position on the strings, an additional sensation accompanies a state of readiness to play. We can explore this by squeezing or pushing the strings, as if gauging their tension—squeezing the strings and then allowing the string-tension to return the fingers and thumb to their previous state.

The following exercise allows us to experience and contrast the ready to play tension levels associated with both soft and forceful playing and helps us establish precise contact points between the fingertips, fingernails, and strings (check the resulting grooves in the fingertips).

Alternate slowly between squeeze and relax sensations, holding each for a few seconds (the fingers and thumb remain in contact with the strings throughout), as follows (**Ex. 1**):

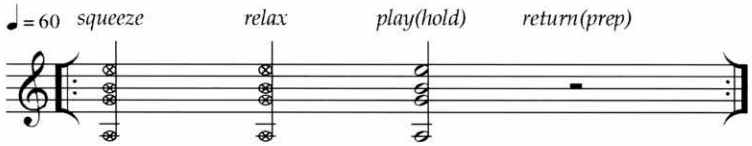
1) as if about to play ***piano***
2) as if about to play ***forte***



Moving Through the Strings and Follow Through

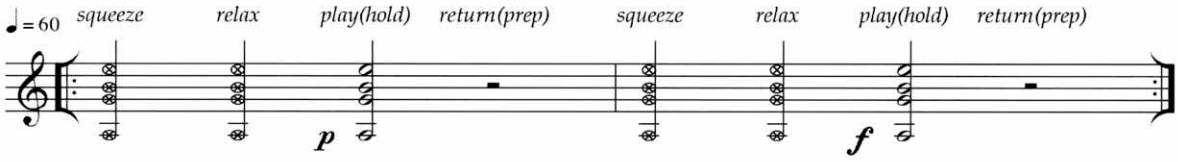
Once prepared to play, the fingers move through the strings under a single short impulse, releasing tension almost immediately and continuing in toward the palm of the hand under their own momentum. The fingers remain inside the palm until the player decides to return them to the strings (see Notes).

- Add the plucking action to the squeeze-relax preparation exercises just practiced: prepare on the strings, squeeze, relax, and then pluck-hold (**Ex. 2**):

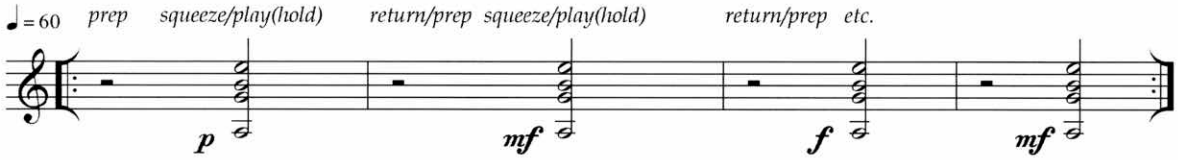


Observe the slow tempo (two counts per event), and make sure that the fingers are relatively relaxed once inside the hand (a noticeable sensation of released tension follows the initial plucking action).

- Alternate between ***piano*** and ***forte*** versions of the exercise. When playing the loud version, be sure to release to a minimal tension level following the initial plucking action (**Ex. 3**):



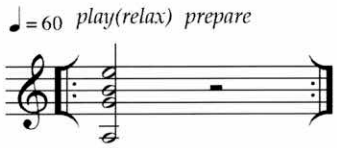
- Combine the squeeze event with the play event (this is the normal way of playing) (**Ex. 4**):



Returning to the Strings

The fingers can return to the strings in a number of ways:

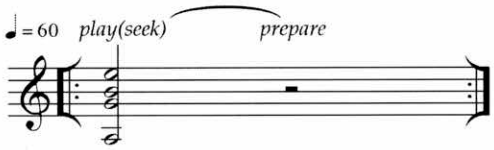
- *Relax-Return*—a natural and simple way to return to the strings when there's plenty of time between events. The fingers relax after the stroke and simply return to a position somewhere in front of the strings, after which they can prepare to play again (**Ex. 5**):



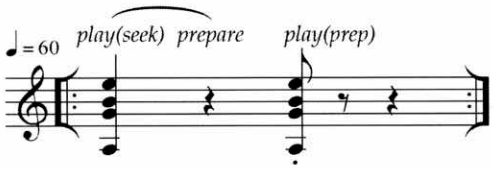
(In normal playing, however, it's rarely the case that there's plenty of time between events.)

Controlled Return—a more refined technique that provides greater accuracy of finger placement and greater control over the sound. The fingers return to the strings in a single continuous movement such that no further adjustment is required to play again. The overall movement is elliptical with an accompanying sensation that the fingers are carefully seeking-out their strings.

- Prepare on the strings and after plucking use the remaining time to return to the strings in a continuous motion, timing the movement to arrive precisely on the third beat ready to play again without further adjustment (**Ex. 6**):



- Use the following *staccato* exercise to help internalize the movement, again bearing in mind that once the fingers reach the strings no further preparation should be made—the fingers must be perfectly positioned to execute their next stroke (**Ex. 7**):



At this point, the three phases of the stroke are experienced as a single gesture.

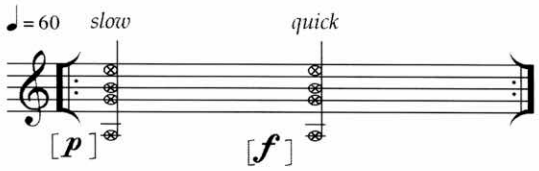
> A finger is prepared for its stroke only if no further adjustment is needed for it to move through the string.

Legato—Returning and Preparing Close to the Strings

Preparing the fingers on the strings ahead of the stroke (*planting*) in an actual piece of music is only useful when a string is sounded from silence. When a string is already sounding a preparation on the string, no matter how brief, results in some degree of staccato. To play with a smoothly connected legato, we need to prepare close to the strings rather than actually on them.

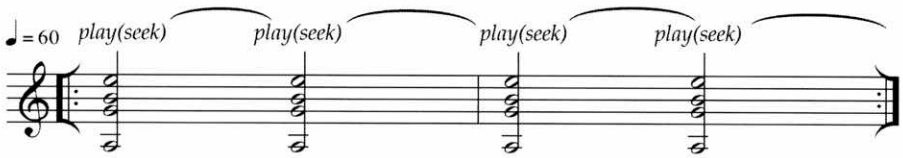
- Alternate between the following movements, holding each for a couple of seconds (**Ex. 8**):

1) moving to the strings slowly and lightly, and squeezing as if about to play ***piano***
2) moving to the strings more quickly, squeezing as if about to play ***forte***



(The contact points should remain the same for both versions of the movement.)

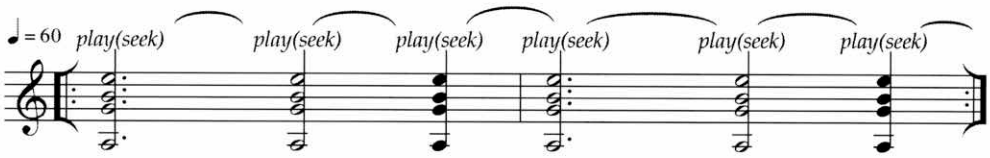
- Next, carefully time the return so that the fingers reach their strings at precisely the moment they are to pluck again, preparing and plucking simultaneously (**Ex. 9**):



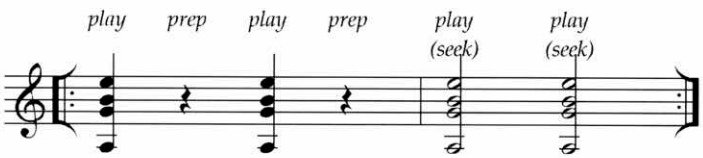
You should feel a distinct contrast between the speed of the fingers as they carefully seek-out the strings on the one hand, and as they make the ensuing stroke itself (which is relatively fast and occurs precisely the moment the fingers make contact with the strings).

This is something that occurs constantly in fine legato playing. In effect, the fingers arrive in front of the strings ahead of time, carefully seeking them out, and reaching them at precisely the moment they are to be played. At that point, what has been a relatively slow preparatory movement becomes the faster, direct movement of the plucking action.

- Alternate between slow and fast versions of the gesture to help automate the movement, as follows (**Ex. 10**):

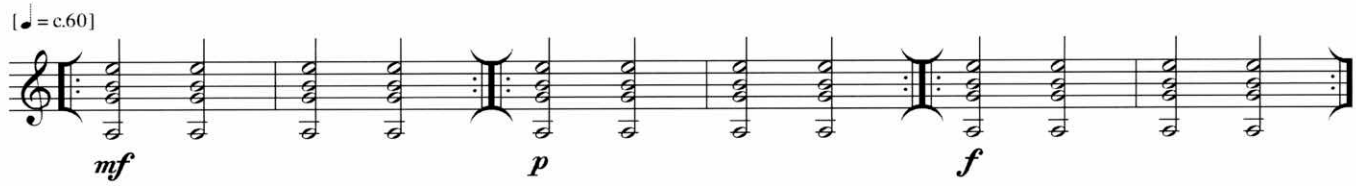


- Also alternate between prepared and legato strokes—at the instant of plucking the strings, both should feel (and sound) the same (**Ex. 11**):



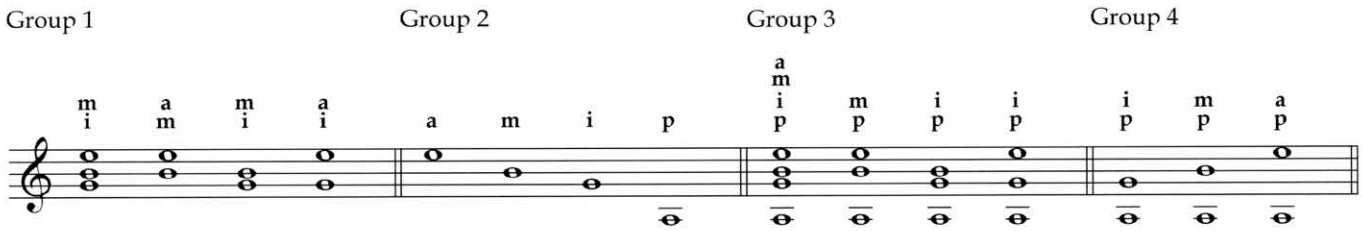
Consistency of Sound

Play repeated-chords at a slow tempo, using slow finger movements, and focusing on legato preparation, consistency of contact points, and evenness of sound (timbre and dynamic). Practice at three dynamic levels— ***mf, p, f*** **(Ex. 12)**:



Practice Routine and Contextualization

After studying the techniques and exercises presented in this lesson, practice the following common finger combinations (which fall into four groups):

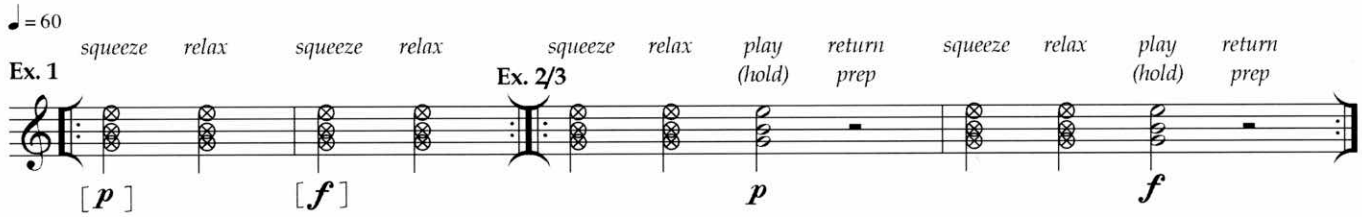


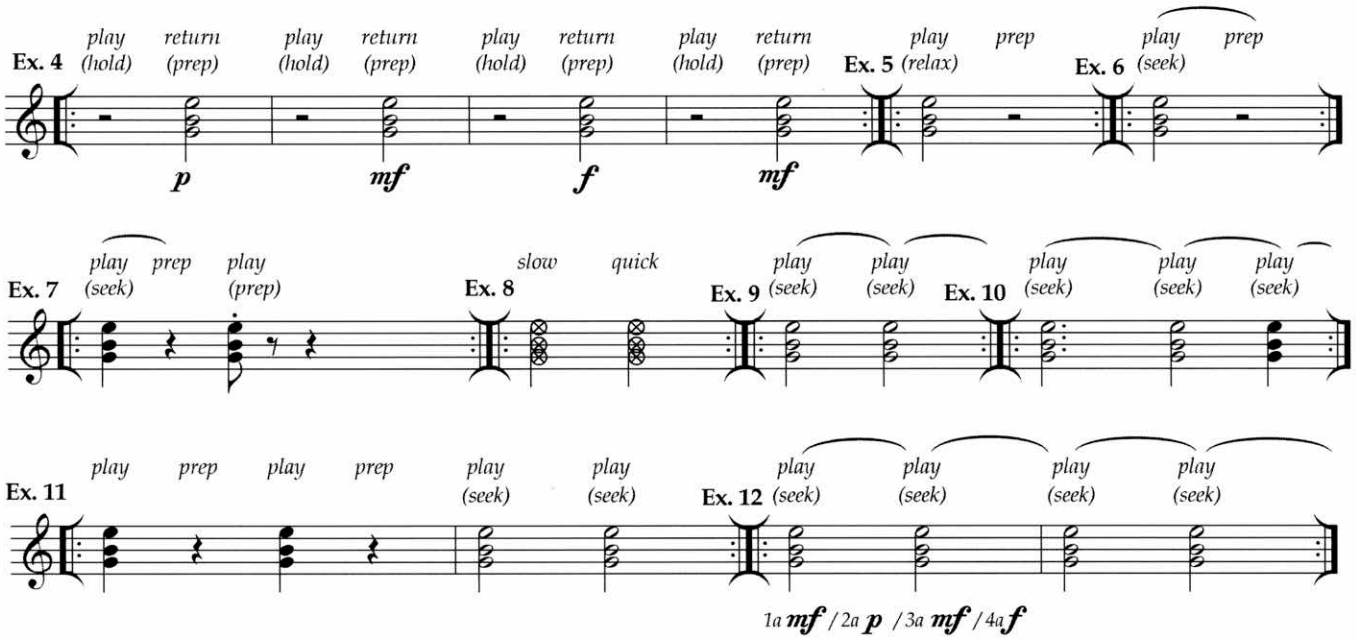
Practice one group each day, cycling through the entire set as many times as needed over a period of several weeks (practice the thumb on each bass-string, assigning a different string each time you practice groups 3 and 4, as shown below):

	Group 1	Group 2		Group 3		Group 4
	ima / ma / im / ia	**a / m / i / p**	(bass)	**pima / pma / pim / pia**	(bass)	**pi / pm / pa**
Cycle 1			⑤		⑥	
Cycle 2			⑥		⑤	
Cycle 3			⑤		④	
Cycle 4			④		⑤	

Practice each finger combination with all of the exercises described during the lesson. Here's the full practice sequence (using **ima** as an example):

contd.



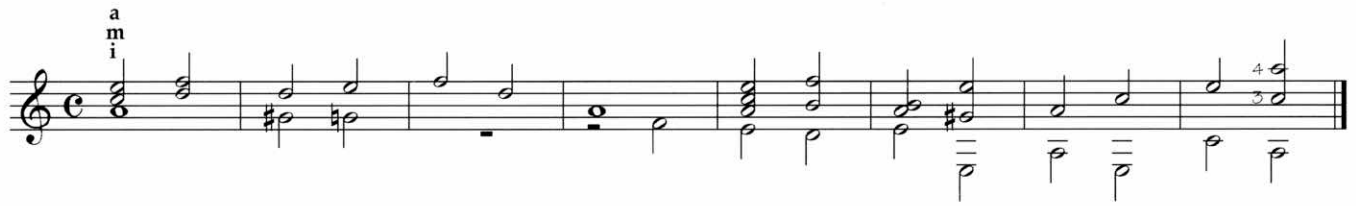


Repeat each exercise until comfortable before moving on to the next one. At the recommended tempo of ♩ = 60 the entire sequence should take about 3 minutes to play through (a complete group of four finger combinations will take about 12 minutes).

As you work through the practice routine over several practice sessions, make a note of the combinations that become comfortable, take them out of the technical practice cycle, and instead go over them briefly as simple play-throughs while continuing to work on combinations that remain tricky with the full technical practice sequence.

A Practice Grid is provided in Appendix 3 to help you keep track of things.

When all groups have been practiced and are comfortable, use the following short passage to help contextualize and maintain the technique.



(You could also try this passage with the exercises provided above, adding repetitions of chords to accommodate alternating dynamic blocks when necessary.)

NOTES

Defining Tension Levels
Fine control of the various tension levels present in the hands and fingers is one of the major goals of technical development. Some degree of tension is, of course, necessary for any kind of movement to occur and for any prepared hand or finger position to be maintained. However, it's important that we employ only an appropriate amount of tension necessary for any particular phase of a playing action—tension easily accumulates, to the detriment of finger independence and coordination.

Although quite often taught, I must advise against unnecessarily returning the fingers in front of the strings immediately after plucking, at least in normal playing (more on this in later lessons).

It isn't possible to experience individual tension-levels as we actually pluck a string—the entire stroke is experienced as a single event. It is possible, however, to isolate and explore the various phases of the stroke and their associated sensations individually before recombining and internalizing them as a single gesture.

We explore right-hand tension levels primarily through dynamics and speed of finger movement.

Preparing the Stroke
It's not only necessary but actually more common to prepare the stroke from a position close to the strings rather than from a pre-placed position on the strings (primarily to avoid choppiness when plucking strings that are already sounding). This issue is explored later in the lesson. We'll also explore applying additional pressure to the strings during the preparation phase of the stroke (as a method of enhancing sonority).

Moving Through the Strings and Follow Through
The sensations associated with plucking and follow through can again be explored through dynamics and the speed of the stroke.

Alternating between soft and loud versions of the exercises help us explore and refine the plucking action and its associated tension levels. The key sensations are the speed of the plucking action and the firmness of the fingers. When playing softly, the fingers move relatively slowly, they move relatively less far into the hand, and the impulse and overall tension level (firmness of the joints) is relatively low. When playing loudly, the fingers move into the hand quickly, move relatively further into the hand, and the impulse and overall tension level (firmness of the joints) is relatively higher.

It's also possible to generate a full, loud tone moving through the string slowly, provided there's a significant displacement of the string during the preparation and / or plucking phases of the stroke. This, along with other advanced techniques along these lines, is explored in Part 2.

Returning to the Strings
Again, I must advise against unnecessarily darting the fingers out immediately following their plucking action (at least in regular playing). Control of tone and dynamic, along with the ability to play rapid arpeggios, scales and tremolos, requires the cultivation of precise contact points and specific manners of placing the fingers on the strings.

The right-hand plucking action is explored in further detail in subsequent lessons, both here and in Part 2 (especially in the lessons in the section Refinement of Sound).

Lesson 6 — Arpeggio Technique

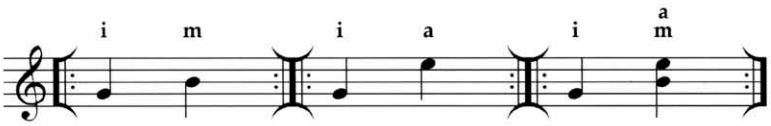
fingers-only arpeggio patterns · practice methods

The right-hand arpeggio is one of the fundamental aspects of classical guitar technique. Working on this technique is useful not only for performing arpeggio passages in pieces of music but also for general right-hand finger independence and control, and for the development of advanced techniques such as tremolo and cross-string ornamentation. In this lesson, we'll explore a number of common fingers-only patterns, along with several practice methods that can be used to internalize them, refine them, and speed them up.

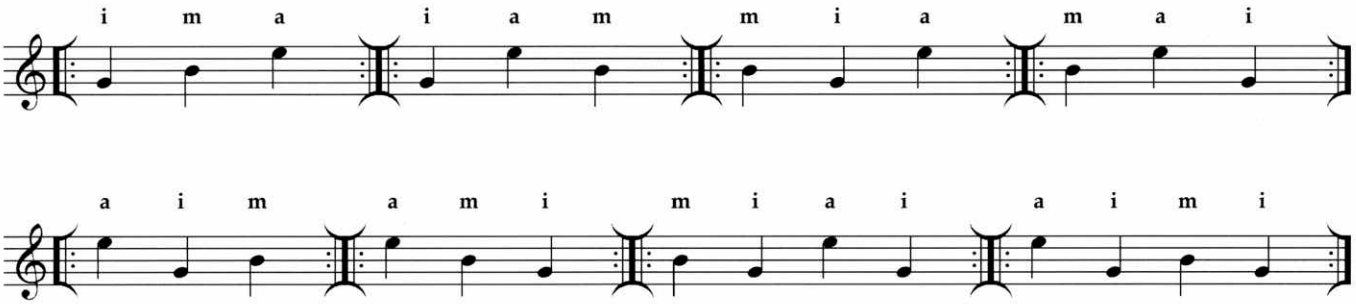
Fingers-Only Patterns

Fingers-only arpeggios crop up continuously in normal playing and are therefore worth isolating and exploring in detail. The hand position is the block-chord position we've been using so far. The common patterns fall into two groups:

Group 1



Group 2



The two groups should be practiced in sequence, with the first becoming comfortable before moving on to the second.

Practice Methods

The practice methods are as follows:

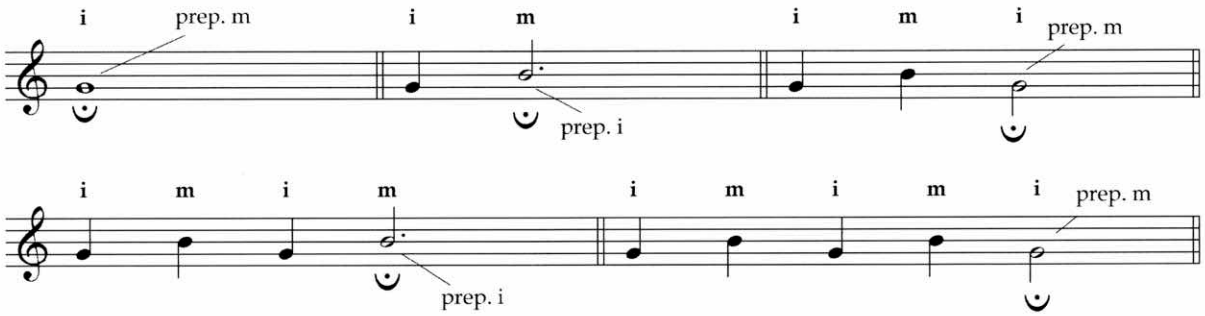
1) *Sequential Addition*
2) *Slow-Fast Alternation*
3) *Accentuation and Dynamics*
4) *Rhythmic Variation*

1 Sequential Addition

Build-up the pattern step by step to automate (internalize) the fingering sequence. For Group 1 patterns, it works as follows:

1. Place the first finger of the pattern on its string, play the first note and simultaneously prepare the next finger on its string; pause—the first finger is back in the hand, the other is prepared on its string ready to play.
2. Play the first-two notes of the pattern and prepare the next finger to play on its string; pause—again, one finger will be back in the hand, the other will be prepared on its string ready to play.
3. Continue in this way until several cycles of the pattern have been built up.

Here's the process, using **im** as an example:

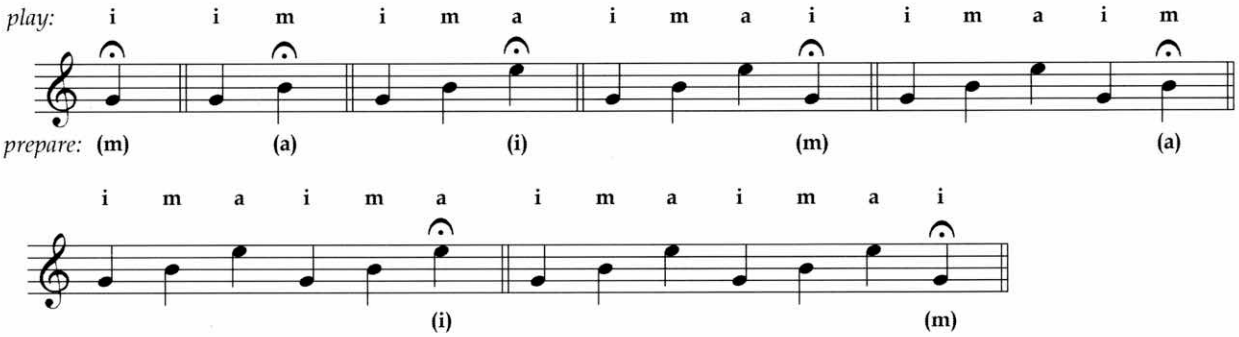


Things to bear in mind:

- the thumb rests on string ⑤ throughout to help support the hand
- at the end of each step, one finger will be prepared on its string ready to play, the other finger will be inside the hand
- when preparing a finger on the string, aim for the precise contact point required for plucking
- the hand is relatively relaxed after each step (check for this)
- the **mac** group move together as a single unit whenever possible

General Practice Guidelines:
- think ahead (visualize and audiate) before executing each step
- alternate back and forth between slow and fast versions of each step
- become comfortable with each step before moving on to the next

The preparation sequence for Group 2 (the three and four-note patterns) is as follows (using **ima** as an example):



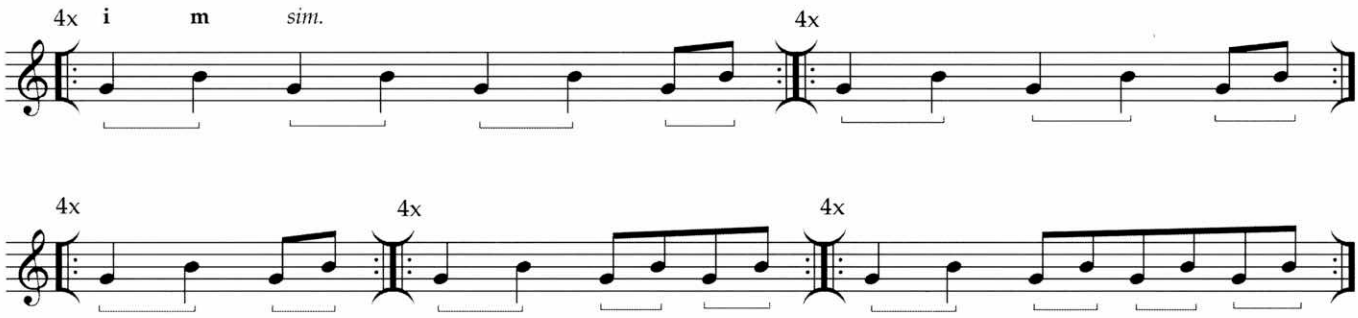
Again, at the end of each step, the next finger is prepared on its string ready to play and fingers that have already played are inside the hand.

2 Slow-Fast Alternation

Once the fingering and preparation sequence of a pattern has been assimilated play continuously at a moderately-slow tempo, alternating with versions at twice tempo as follows:

	slow	fast
1)	3x	1x
2)	2x	1x
3)	1x	1x
4)	1x	2x
5)	1x	3x

Here's the process written out for the **im** pattern:

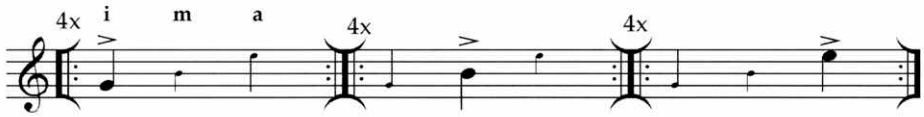


Think ahead (visualize and audiate) before executing each step and become comfortable with each before moving on to the next.

> **Listening**
> Listen carefully to the fast repetitions to determine if they are louder than the slow ones. If they are, this means that the fingers are over-tensing during the fast portion of the exercise.

3 Accentuation and Dynamics

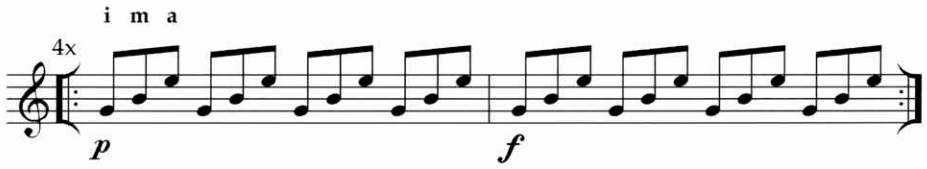
- Explore each finger individually, playing that finger consistently loudly while the other fingers remain consistently very soft (ghosted):



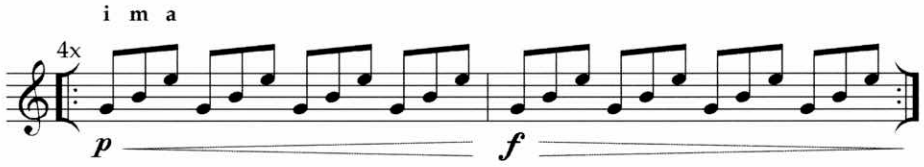
RH 6
Arpeggios

Patterns that include alternation of **m** and **a** are difficult to play loud or fast—a technique used to help deal with this is described in Lesson 8, The Compound Stroke.

- Alternate back and forth between soft and loud versions of the pattern, repeating this four times:



- Start softly, gradually crescendo to ***forte***, gradually decrescendo back to ***piano***:



String Blocking
Another way to isolate and investigate the sound of an individual finger is by placing the left-hand fingers on the remaining strings to block (damp) their sound. This is especially useful when playing crescendo-diminuendo.

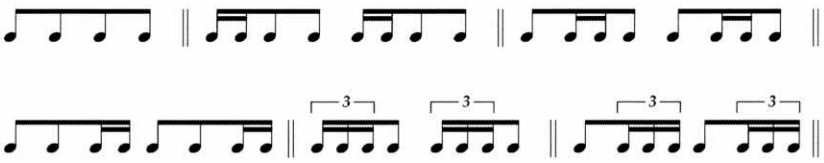
4 Rhythmic Variation

Apply the following rhythmic variations to the pattern:

For 2-note groupings:

For 3-note groupings:

For 4-note groupings:



Practice Routine and Contextualization

After exploring the practice techniques described above, work on the two groups in order, becoming comfortable with the first before moving on to the second, and applying the four practice methods to each pattern. A Practice Grid is provided in Appendix 3.

Work on Group 1 each day until the patterns become comfortable, then maintain them as play-throughs and move onto Group 2:

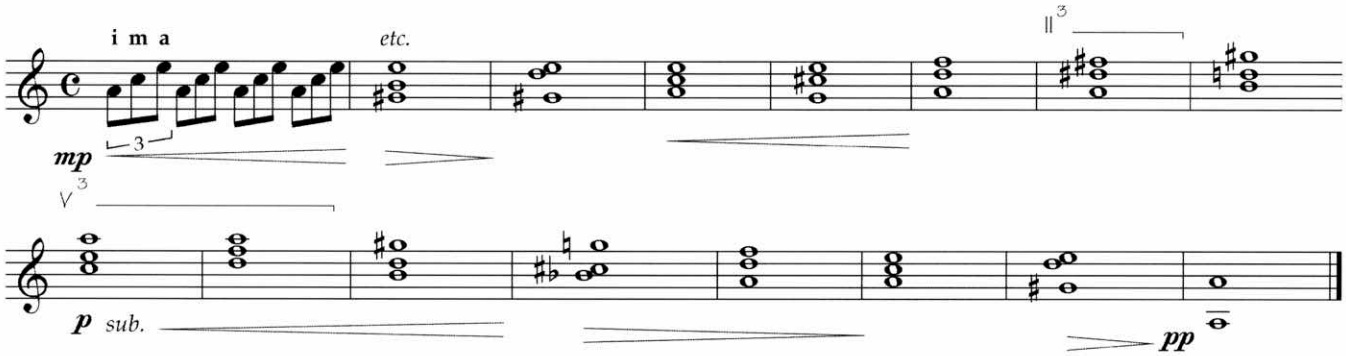
	each day
Group 1	**im—ia—i-ma**

Work on the Group 2 patterns two per day, cycling through the set several times over the course of a few weeks. Once familiar with the practice techniques, the full routine of two patterns per day should take no more than 6 or 7 minutes to practice.

	day 1	day 2	day 3	day 4
Group 2	**ima—iam**	**mia—mai**	**aim—ami**	**miai—aimi**

Again, patterns that becomes comfortable should be taken out of the full practice sequence and briefly played-through while continuing to apply the full set of practice methods to the remaining patterns of the group.

Use the following chord progression for contextualization and maintenance (for **im** and **ia**, play only the strings required for those patterns):



When changing from one chord to the next, add left-hand fingers sequentially, as required, rather than placing the entire chord as a block—this is a standard left-hand technique for arpeggio passages (and is explored further in later lessons).

NOTES

Guitarists regard arpeggio technique as the systematic repetition of some combination of the thumb and fingers, one per string. In a broader sense, however, any instance of one-finger-per-string alternation, regardless of whether it's repeated or includes the thumb, may also be considered a part of the technique and may be practiced in the form of a repeated systematic pattern.

Sequential versus Full Plant

It's also possible to return and prepare all of the fingers on their strings together at the beginning of each cycle (a *full plant*). This, however, presents two problems: 1) the notes on each string sound for differing lengths of time; 2) the last finger of the pattern has hardly any time to return to its string. While a full plant can be used for the first instance of a pattern, the fingers should be prepared sequentially from that point on.

Practice Methods

The four practice methods described here will be used for many of the techniques presented in this book. Here's a little more information about them:

Sequential Addition helps us to quickly internalize a pattern systematically building on increasingly longer comfortable actions.

Slow-Fast Alternation adds successively longer bursts of speed in an otherwise moderate tempo, internalizing increasingly longer chains of movements within an overall controllable tempo that allows us to think ahead as well as to assess the sensations in the fingers, hand, and arm.

Accentuation and Dynamics improves evenness of dynamic and tone, enhances finger independence, and provides access to the tension levels of individual fingers:

Rhythmic Variation is a further method of combining a moderate overall tempo with short bursts of automated speed. Each rhythmic grouping exercises control and independence of a specific finger-pair or finger-group within the pattern, and helps increase the overall speed with which the pattern can be accurately played.

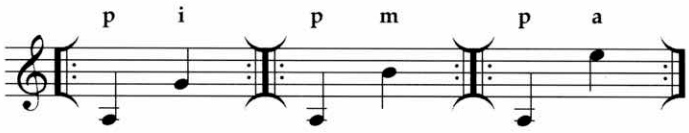
Additional arpeggio practice techniques are explored in Part 2.

Lesson 7—The Common Thumb-Fingers Patterns

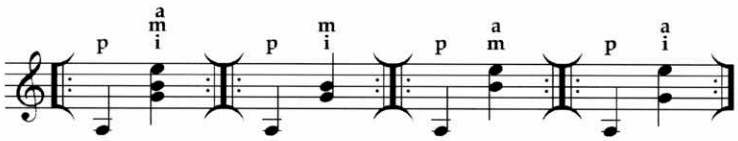
categories of common thumb-fingers arpeggio patterns

In this lesson we'll look at the standard arpeggio patterns that begin with the thumb—patterns that occur frequently in musical situations. There are six groups:

Group 1

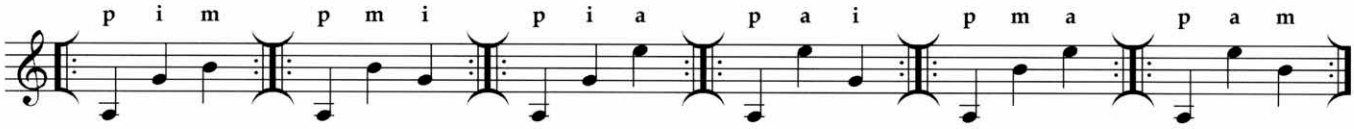


Group 2

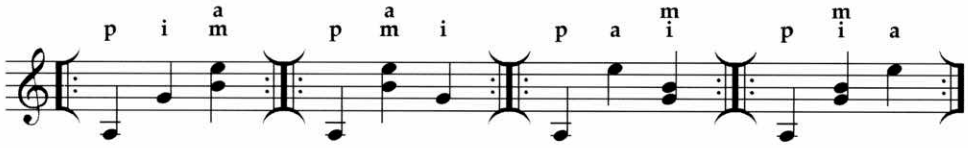


Patterns that involve more than one alternation of **m** and **a** have been reserved for Part 2, as have the more challenging combinations **pm-ai** and **p-ai-m**.

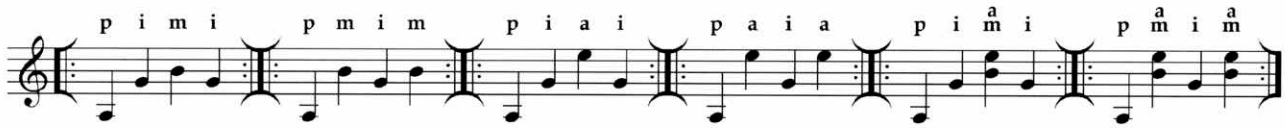
Group 3



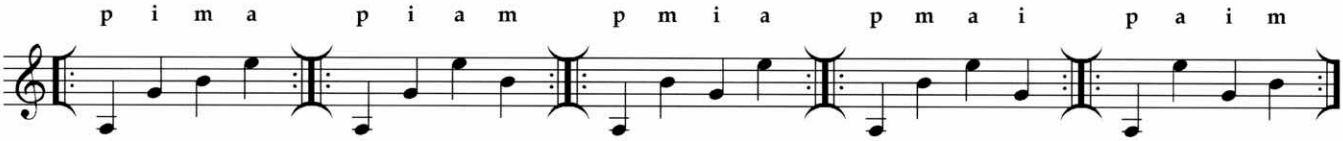
Group 4

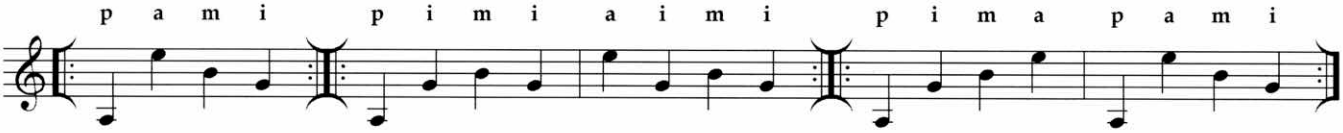


Group 5



Group 6





Practice Routine and Contextualization

Work on these patterns with the four methods provided in Lesson 6 for the Fingers-Only patterns, beginning with Groups 1 and 2 on alternate days:

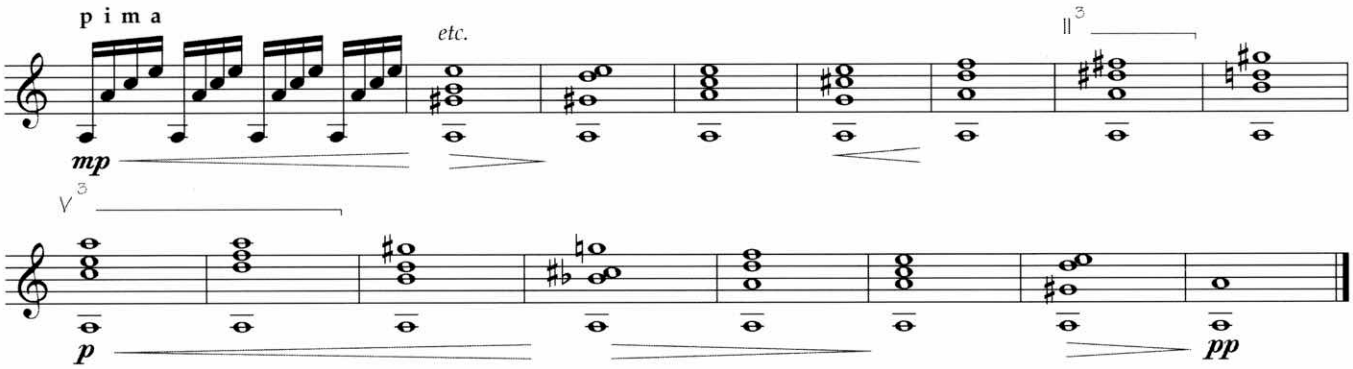
	Day 1	Day 2
Groups 1 & 2	**pi—pm—pa**	**p-ami—p-mi—p-am—p-ia**

Once comfortable, maintain the Group 1 and 2 patterns as play throughs and move on to groups 3-6. These should be worked on in sequence, with each group becoming comfortable before moving on to the next:

Taking two patterns from the appropriate group each day, the full routine should take around 8 mins. A Practice Grid is provided in Appendix 3 to help keep track of things.

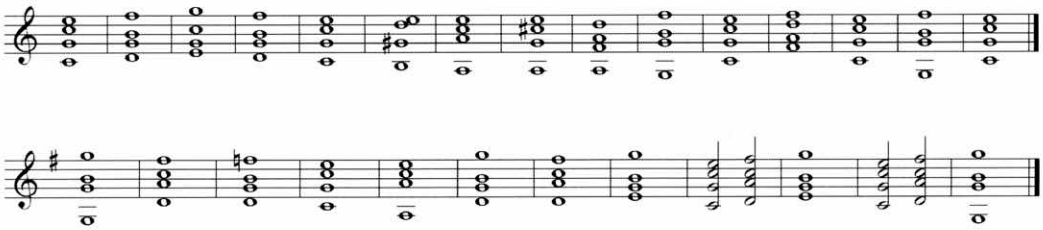
	Day 1	Day 2	Day 3	
Group 3	**p-im—p-mi**	**pia—pai**	**pma—pam**	
Group 4	**p-i-ma—p-ma-i**	**p-a-im—p-im-a**		
Group 5	**pimi—pmim**	**piai—paia**	**p-i-ma-i—p-ma-i-ma**	
Group 6	**pima—piam**	**pmia—pmai**	**paim—pami**	**pimi-aimi—pima-pami**

Once a pattern becomes comfortable, use the chord progression provided in Lesson 6 to maintain and further internalize it—add an open fifth-string pedal to each chord to provide a note for the thumb (for patterns that use less than four strings, play only the strings required for the particular pattern):



Any four-note chord progression can of course be used to contextualize and maintain an arpeggio pattern; obvious examples are Carcassi *Op. 60 No. 2* and Giuliani *Op. 48 No. 5* (among many other early nineteenth-century arpeggio studies), Villa-Lobos *Prelude No. 4,* and Leo Brouwer *Etude simples No. 6.* Even better, write or improvise your own chord progressions.

Carulli *24 Preludes Op. 114* is a useful source of chord progressions to which virtually any arpeggio pattern may be applied. For example:



Lesson 8—The Compound-Stroke

ma—am at speed · the circular arpeggio

***ma—ma** at Speed*

We've already mentioned the difficulty presented by the alternation of the non-independent **ma** finger pair, especially at faster than moderate speeds. In this lesson we'll explore a technique that allows these fingers to play at speed as though independent—the Compound Stroke.

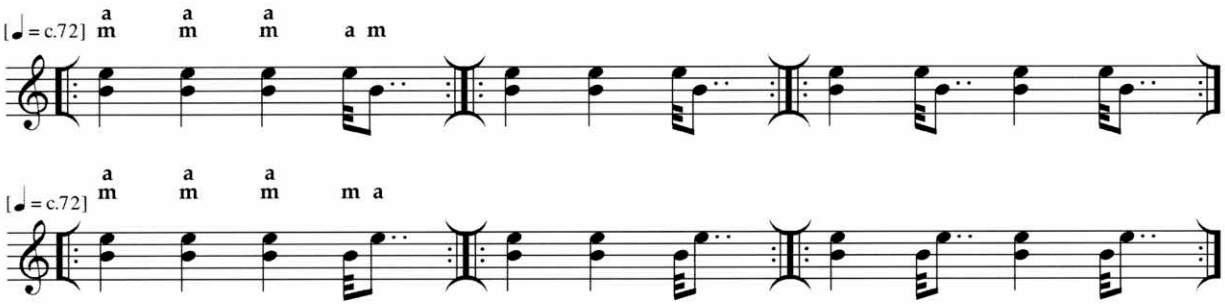
Plucking **ma** together as a single unit, the movement of either finger can be delayed slightly, even though the two fingers move under a single impulse. A rolled two-note arpeggio results—a compound stroke.

- There are two ways to create the non-simultaneous action of the two fingers within the overall single stroke:

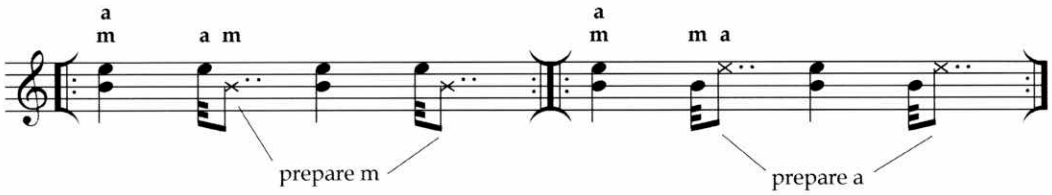
  1. The second finger of the pair momentarily resists the plucking action of the first.
  2. The second finger of the pair is prepared close to but not actually touching its string—the plucking action of the first finger pulls the second onto and through its string, creating a slight delay between the two fingers.

Either of these methods can come into play during an alternation of **m** and **a**, depending on the required speed, though it probably isn't possible to determine an exact formula that applies in all cases. We simply listen carefully, assess the rhythm that results, and learn to associate accurate versions with the sensations produced in the fingers.

- Begin by alternating back and forth between a simultaneous stroke and a compound stroke, as follows (**Ex. 1**):



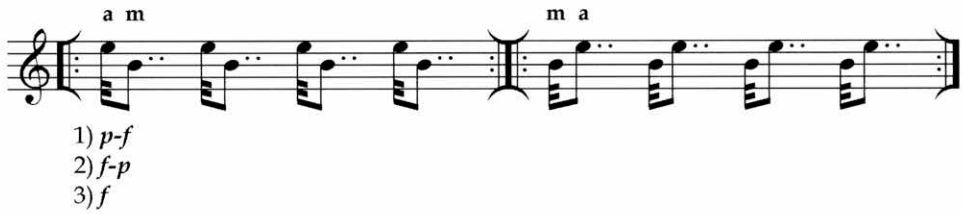
- Allow the second finger of the pair to prepare on its string as part of the compound stroke but withhold its plucking action, making sure it's ready to play but also appropriately relaxed (this allows us to experience the sensation associated with the release of momentary tension held in the second finger of the compound pair) (**Ex. 2**):



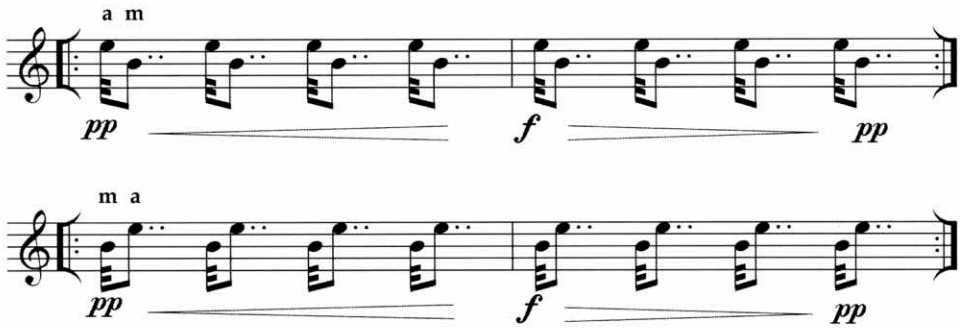
- Return to Ex. 1 (the fully-plucked compound stroke exercises) and experiment with a range of tempos to discover the *lower* speed limit at which the technique works comfortably. At and below this speed it's preferable to play a controlled two-note arpeggio using independent movements of the two fingers, rather than a compound-stroke.

- To develop further control over the timing of the second finger of the compound pair, practice as follows (**Ex. 3**):

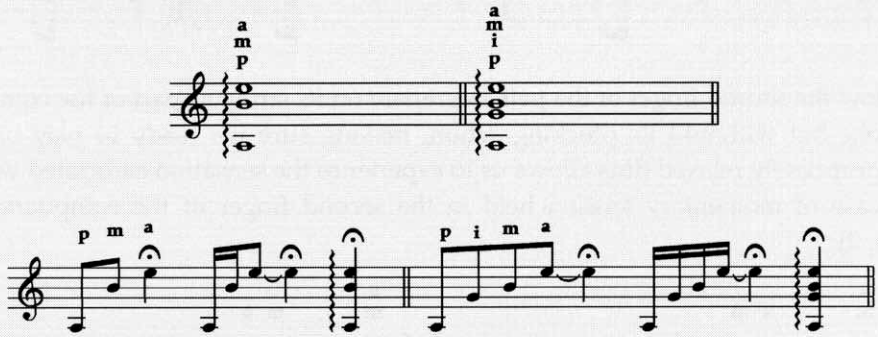
  1. with the second finger of the pair consistently louder than the first
  2. with the second finger of the pair consistently softer than the first (this is challenging)
  3. with both fingers at the same volume



- Finally, play both fingers at the same volume within an overall crescendo and diminuendo, noting the relative rise and fall of tension in the hand (**Ex. 4**):



At this point, explore the use of the compound stroke in playing quick ascending rolled chords:

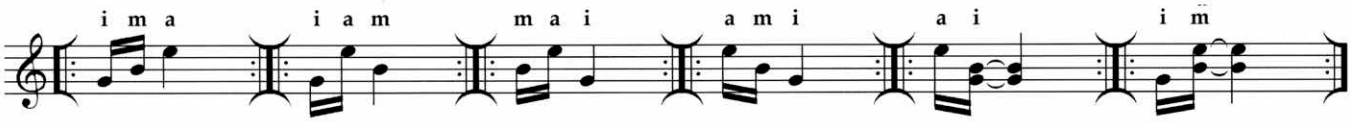


Once the preceding exercises are comfortable, incorporate the compound stoke into the relevant arpeggio patterns from the previous lessons:

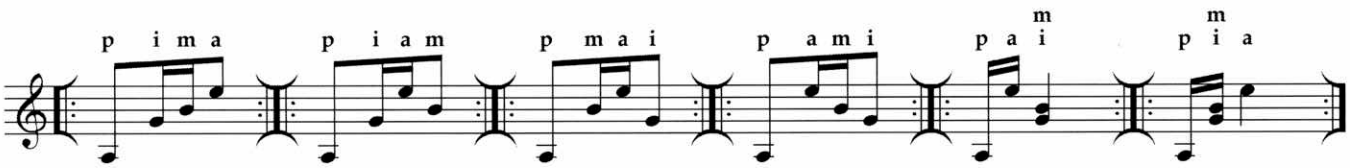
from Group 1	**ima—iam—mai—ami—a-im—im-a**
from Group 2	**pima—piam—pmai—pami—p-a-im—p-im-a**

- Use the following rhythmic patterns to help internalize the technique (**Ex. 5**):

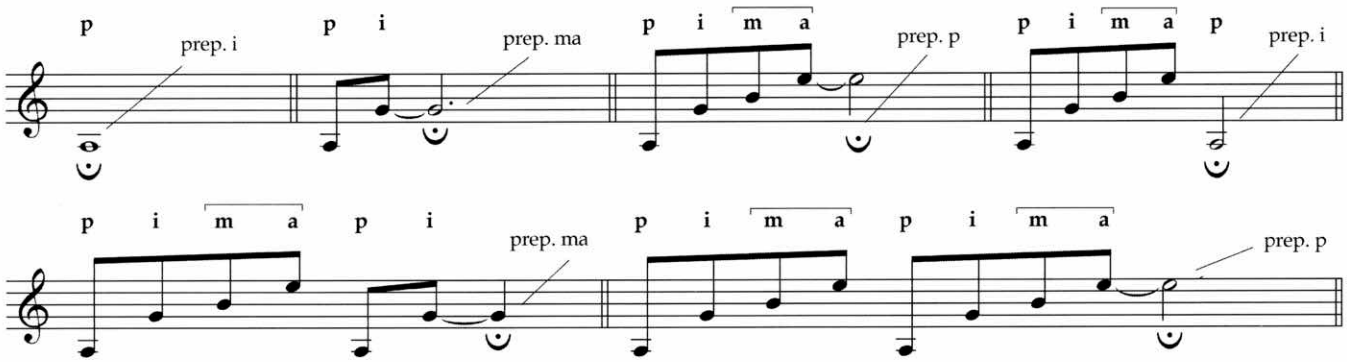
Group 1



Group 2

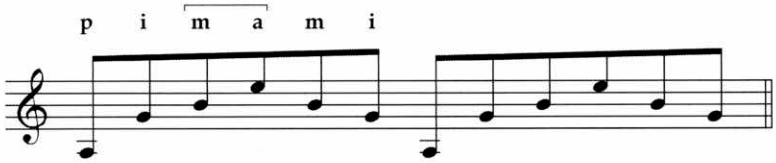


Use Sequential Addition to create cycled versions of each pattern in even sixteenth-notes, treating the compound pair as a single element within the sequence). For example (**Ex. 6**):



- Also use the Slow-Fast Alternation and Accentuation and Dynamics practice methods, as described in lesson 6.

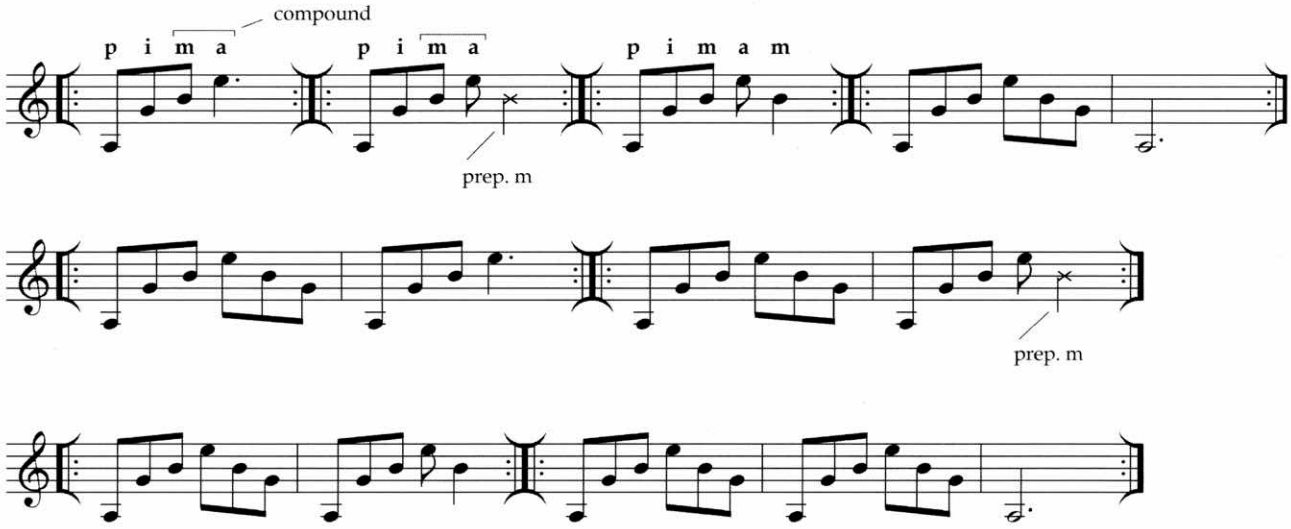
*The Circular Arpeggio (**pimami**)*



The tricky, but common, 'circular arpeggio' pattern is played with an initial **ma** compound stroke followed by a quick independent return of the **m** finger to its string., as follows (**Ex. 7**):

RH 8
Arpeggios

1. establish **p-i-<u>ma</u>** using a compound stroke for **ma**
2. add a quick return and preparation of **m**
3. establish **p-i-<u>ma</u>-m**
4. continue to add elements to build up several cycles of the pattern



Practice Routine and Contextualization

Practice the two groups and the circular arpeggio together, taking two patterns from each group per day, adding the circular arpeggio on the third day, and cycling through the entire sequence several times over the course of a few weeks (c. 8′) (a Practice Grid is provided in Appendix 3):

	Day 1	Day 2	Day 3
Group 1	**ima—iam**	**mai—ami**	**a-<u>im</u>—i-<u>ma</u>**
Group 2	**pima—piam**	**pmai—pami**	**p-a-<u>im</u>—p-<u>im</u>-a—pimami**

Once assimilated, use the chord progressions provided in Lessons 6 & 7 to contextualize and maintain the patterns (at tempos appropriate to the use of the compound-stroke technique).

Again, any progression of four-note chords can be used to contextualize these patterns. While the standard study piece for the circular arpeggio is probably Giuliani *Op. 48 No. 5*, the more extended and melodic Mertz *Fingal's Höhle(Bardenklange, Op. 13), No. 5* is even better.

NOTES

The Compound Stroke works only at relatively fast speeds, where the plucking sensation remains one of a single impulse. At slower tempos, the degree of tension required to create the slower rhythm increases significantly, and at these speeds (and slower) two separate, independent strokes are preferable.

The figures used in Ex. 5 are very similar to the fingerings used for quick cross-string ornaments (explored in Part 2).

The Circular Arpeggio Despite its ubiquity and musical effectiveness, the **pimami** circular arpeggio is difficult to play quickly and accurately. The reason for this is that the pattern contains a compound **mam** alternation that can't be dealt with by a compound stroke alone (since a compound stroke can only be applied to a single instance of **ma** or **am**). The solution is to follow an initial **ma** compound stroke with a quick independent return of the **m** finger to its string.

Further movement forms of this kind are explored in Part 2.

Lesson 9—Shared-String Alternation and String Crossing

hand position and finger curvature—the forearm · stroke preparation—legato · consistency of sound · string crossing—the forearm · correcting awkward string crossings

Like arpeggio technique, shared-string alternation is a fundamental technique of the right-hand. Virtually every piece of music and musical texture requires it (even arpeggios alternate the fingers from string to string) and it's the key right-hand technique for scale passages and passagework. Yet, for many students, mastery of fast, controlled alternation (not to mention merely consistent alternation) can be elusive.

The technique consists of two main elements:

1. systematic shared-string alternation at moderate to fast speeds
2. string crossing

Hand Position and Finger Curvature

Placing more than one finger on the same string requires a modification to the hand position we've been using so far, if both fingers are to play with equal facility. This consists of a subtle adjustment to the forearm contact-point with the upper bout of the guitar, which in turn results in subtle changes in the relative curvatures of the fingers.

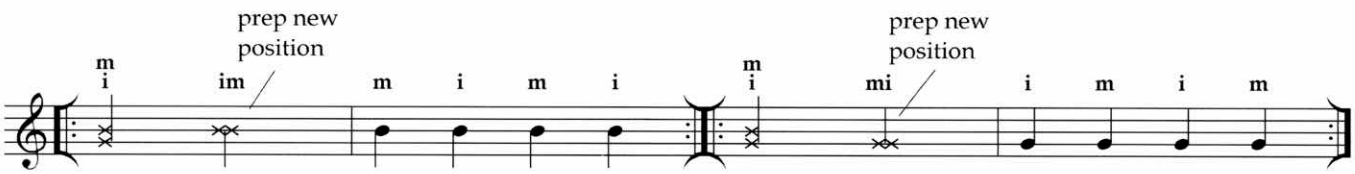
- Establish an optimal hand position for **im** alternation on string ② (for example) by making the following adjustment:

  1. begin in standard (arpeggio) position with **i** on string ③ and **m** on string ②

  2. make a small forward movement of the arm to bring **i** onto string ②—a subtle change in the curvature of the two fingers results: **i** will be slightly straighter in its middle joint and **m** will be slightly more curved at its middle joint

A similar adjustment occurs if we bring the **m** finger to join the **i** finger on string ③, except that in this case the **m** finger is brought to its new string by a subtle backwards movement of the forearm.

- Use the following exercises to explore the subtle arm movements and changes in finger curvature that occur when moving from an arpeggio (block chord) hand position to a shared-string position (**Ex. 1**):



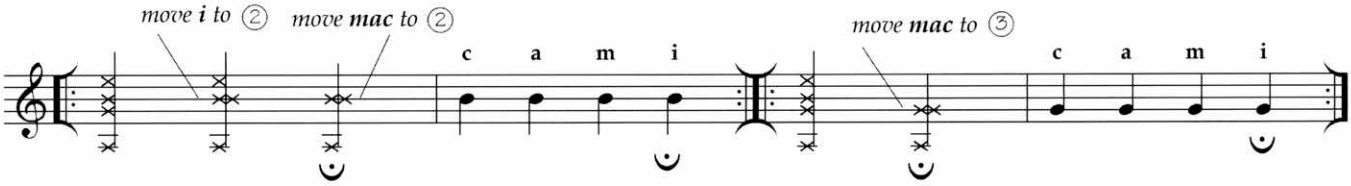
RH 9
Alternation

Checklist

- the thumb rests on string ⑥ and its angle changes as the fingers move between positions
- the finger is moved to its string by a small movement of the arm (rather than by reaching with or contracting the finger itself)
- the curvature of both fingers is slightly altered (not just the finger that's moving to the new string)

- Explore these exercises with the **a** and **m** fingers as well.

- Place all of the fingers (**ami**) in block-chord position (with the thumb on string ⑤) and move **i** to string ② *without* moving the arm. Then move *all* of the remaining fingers (**ma** and **c**) onto string ②, making sure this is accomplished with a backwards movement of the forearm only. Also practice moving back and forth from the block-chord position to all of the fingers on string ③ (**Ex. 2**):



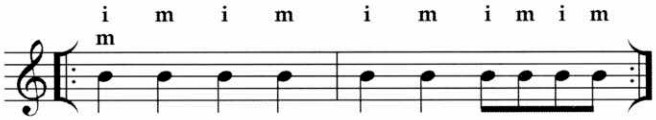
Stroke Preparation and Legato Alternation

When alternating on a shared string, the finger movements must be precisely-timed to avoid unintended breaks in sound, as follows:

- as one finger plucks, the other seeks out the string, making contact and plucking simultaneously

- at tempo, both fingers are in constant motion

- Carefully seek out the string, making contact with it only at the instant of plucking **Ex. 3**):



It's very important to cultivate precise and consistent contact points between the fingernails, fingertips, and string.

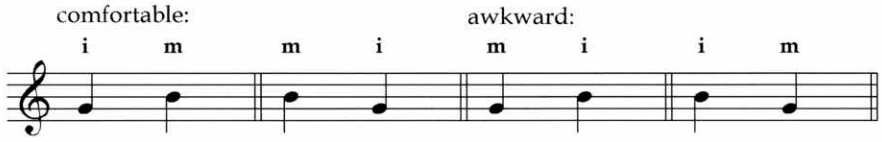
Consistency of Sound

- Play slow repeated notes on string ① with the finger-pairs **im—mi** and **ma—am**, using slow finger movements and focusing on precise contact points and evenness and consistency of sound and dynamic. This short paragraph describes a very important exercise!

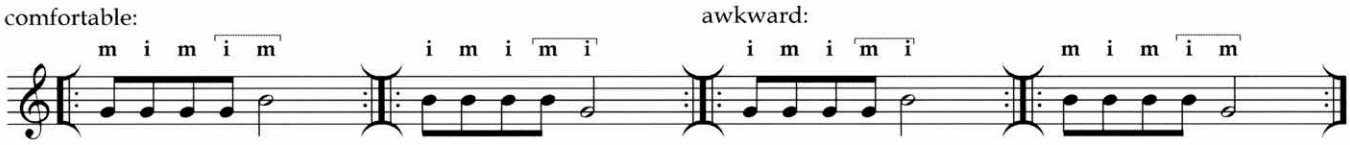
String-Crossing

Moving the alternating finger-pair between the strings is again accomplished with the help of a small arm movement (rather than by reaching with the fingers). Bear the following in mind:

- when moving to a higher string it's more comfortable to lead with **m**
- when moving to a lower string it's more comfortable to lead with **i**

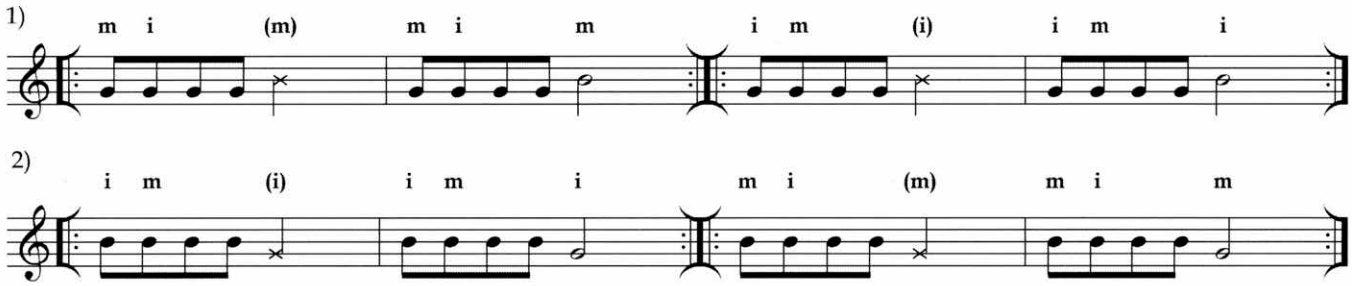


- Practice and compare comfortable and awkward string crossings (resting the thumb on string ⑤ for support) (**Ex. 4**):

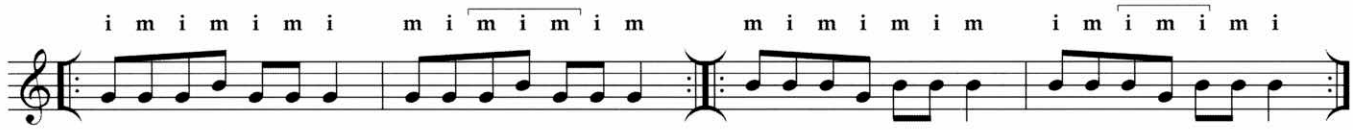


While it isn't necessary to adjust the hand position to play an isolated note on a new string (unless the wrong finger leads), an arm movement should nevertheless be incorporated in these exercises.

- Prepare the finger that leads the string crossing on the new string ahead of time (as soon as possible), assisted by a subtle movement of the arm (**Ex. 5**):



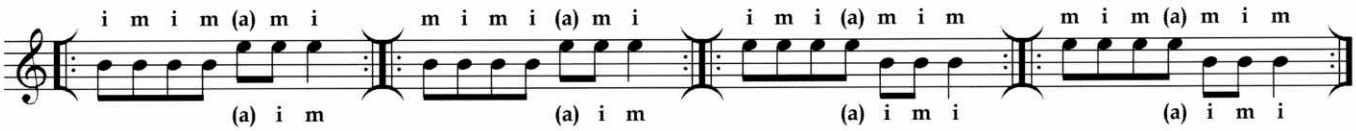
- Awkward string crossings (bracketed below) are accomplished by a temporary adjustment to the curvature of the lead finger rather than with the usual arm movement (**Ex. 6**):



Correcting Awkward String Crossings

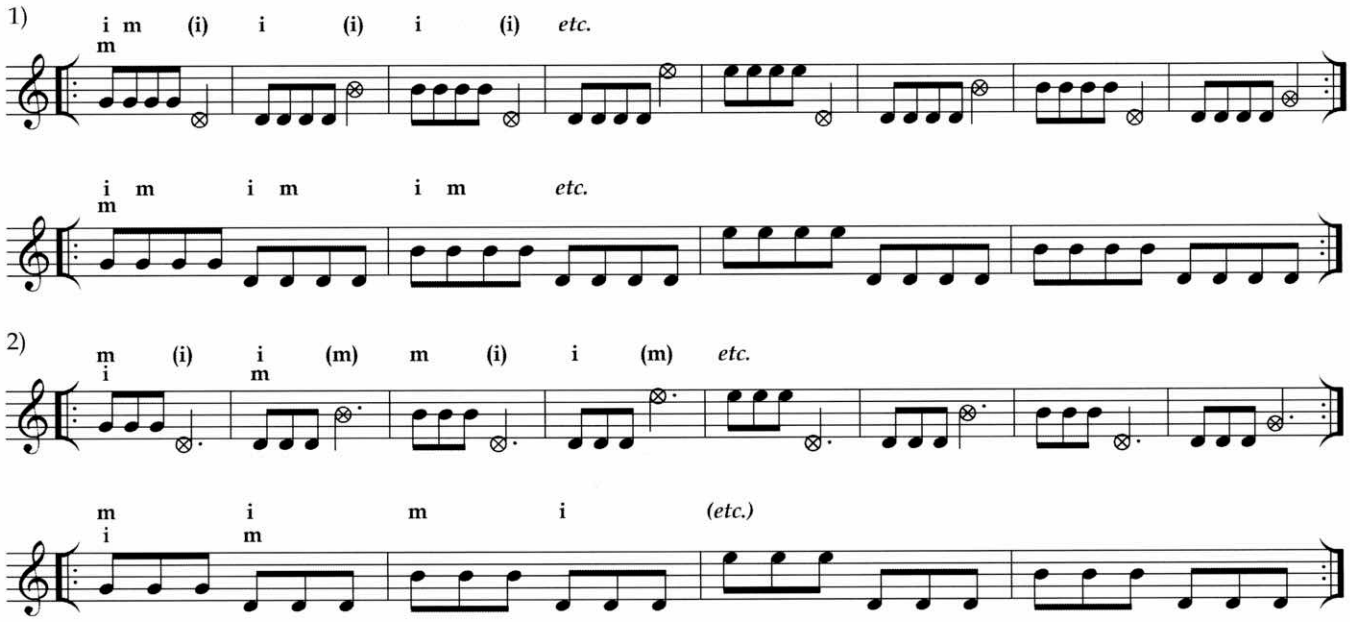
While we often encounter potentially awkward string crossings in pieces, it's often possible to mitigate these by incorporating the **a** finger, which needs only play a single note to correct the string-crossing sequence.

- Practice the following formulas with finger preparation on each new string and in alternating Slow-Fast versions. The string crossing and its corresponding arm movement occur on the note following the **a** finger (**Ex. 7**):

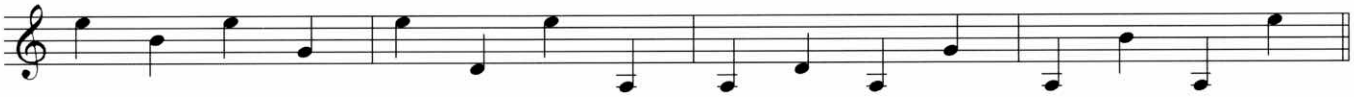


Further Arm Movement

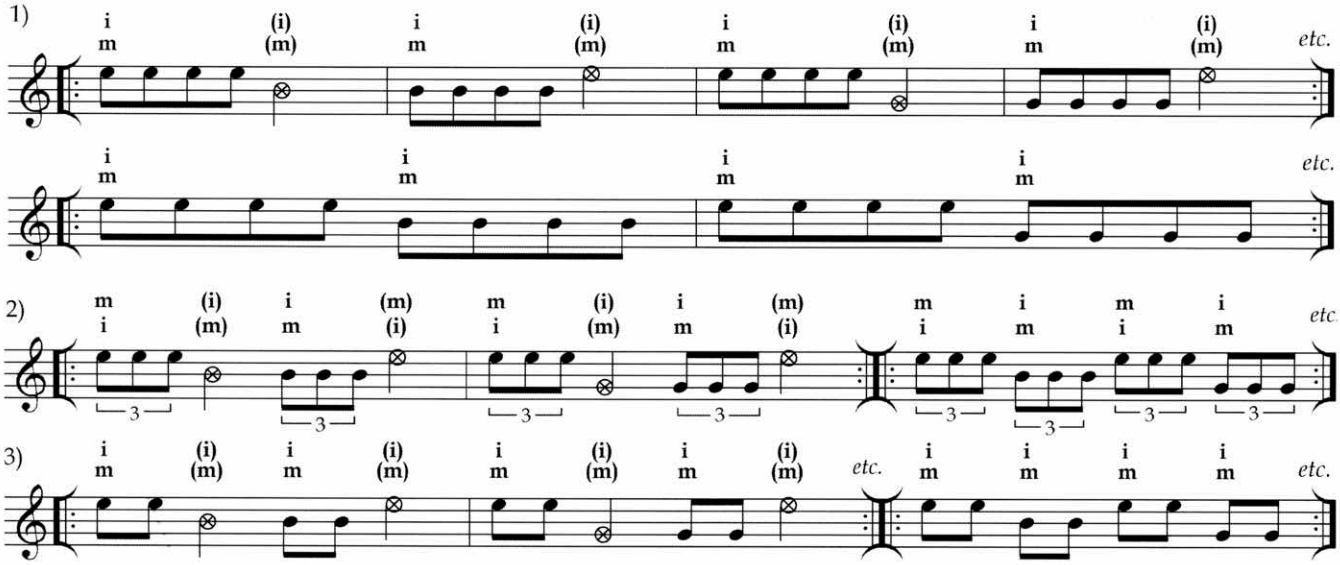
Explore the movement and positioning of the arm in non-adjacent string crossings. Establish the finger preparation for each string crossing (as shown), then play the continuous version. Practice with both strict **im** and **mi** alternation (**Ex. 8**):



- Memorize the following string sequence to use as the basis of a set of comprehensive string crossing exercises:



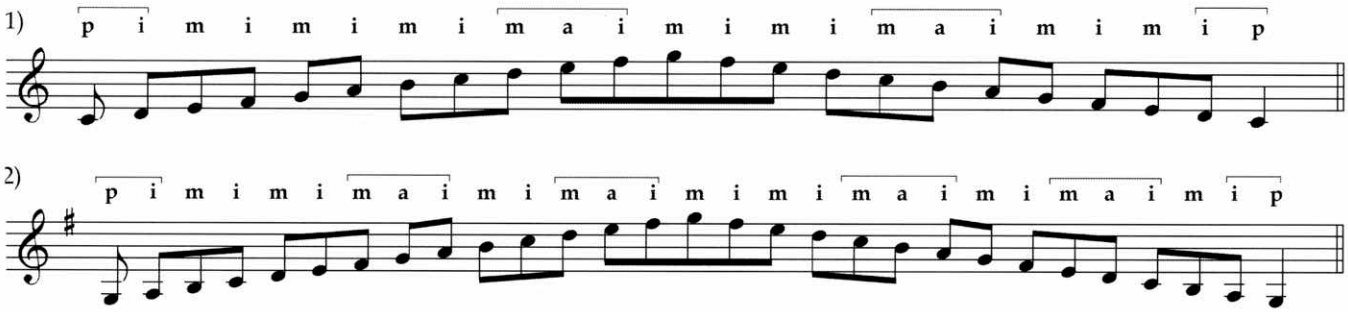
- Apply the following patterns to this string sequence (use an arm movement to carry the fingers to each new string and prepare the lead finger on the new string ahead of time, resting the thumb on string ⑥) (**Ex. 9**):



Practice Routine and Contextualization

Once comfortable with the information and exercises, use Ex. 3, 5 and 7 as a daily warm -up to Ex. 8. When Ex. 8 becomes comfortable (after a week or two), retain Ex. 3, 5 and 7 and switch to Ex. 9 (use the Practice Grid in Appendix 3 to keep track of things).

Once all of this is comfortable, apply the technique to the following lower-position scales for contextualization and maintenance at a moderate tempo, practicing each with a) strict **im** and **mi** alternation; and b) with corrected string-crossings (as shown):



(Be sure to prepare the lead finger on its new string for each string crossing.)

> When practicing formulaic right-hand fingerings in scales and other passagework, it's helpful the say the right-hand finger names out loud as you slowly play through the passage.

NOTES

Several factors compel us to develop a systematic approach to strict finger alternation:

- **Velocity**—as the speed between consecutive notes increases, the ability of a single finger to recover from its stroke and return to the string ready to play diminishes.

- **Quality of Sound**—a controlled sound requires the fingers be returned to the strings in a specific and precise way; as the tempo increases, the ability of a single finger to repeatedly sound a string with controlled tone and dynamic diminishes.
- **Minimization of Tension**—beyond slow to moderate tempos, it takes a greater effort to immediately return a finger to the string than it does to use a finger that's already in position.

Hand Position and Finger Curvature
When playing on a single string with multiple right-hand fingers, there's no need to modify the oblique angle of attack, nor turn the hand at the wrist (which would put the hand out of alignment with the arm). The faster the alternation speed, the more this is true (a subtle clockwise rotation of the forearm, on the other hand, can be helpful at high speeds).

The small changes in the curvature of the middle joint can be observed by watching a finger pivot on its string as the arm makes small forward and backward adjustments: when taking **i** onto the higher string, **m** pivots; when taking **m** onto the lower string, **i** pivots.

Practicing switching between a block-chord position and placing all of the fingers on the same string (**imac**) provides the limiting case—an exaggerated version of the movement which helps moderated versions become more comfortable.

Stroke Preparation and Legato
Deliberate non-legato right-hand articulation (*staccato, détaché* and *marcato*) is explored in Part 2.

Note that only the actual string crossing is prepared on the string; subsequent notes are prepared at the instant of plucking.

The importance of cultivating precise and consistent contact points between the fingernail, fingertip, and string can't be overemphasized. This is critical not only to control of sound but also to right-hand speed and accuracy in tremolos, cross-string ornaments, and fast passagework.

String Crossing
In situations where it isn't possible to lead with the correct finger, a greater amount of immediate preparatory arm movement is required (when leading with the correct finger there is a little more time for the next finger to reach the new string).

Correcting Awkward String Crossings
Adding an instance of the **a** finger not only corrects the awkward string crossing, it also allows us to choose which finger will follow it, guaranteeing that the next string crossing will be a comfortable one as well.

Further Arm Movement
When moving between adjacent strings, it isn't necessary to change the actual contact *point* between the arm and the upper bout of the guitar—there is enough 'give' in the arm's surface to accommodate the position change. Crossing between non-adjacent string pairs, on the other hand, often does require a change in the actual contact point on the surface of the forearm.

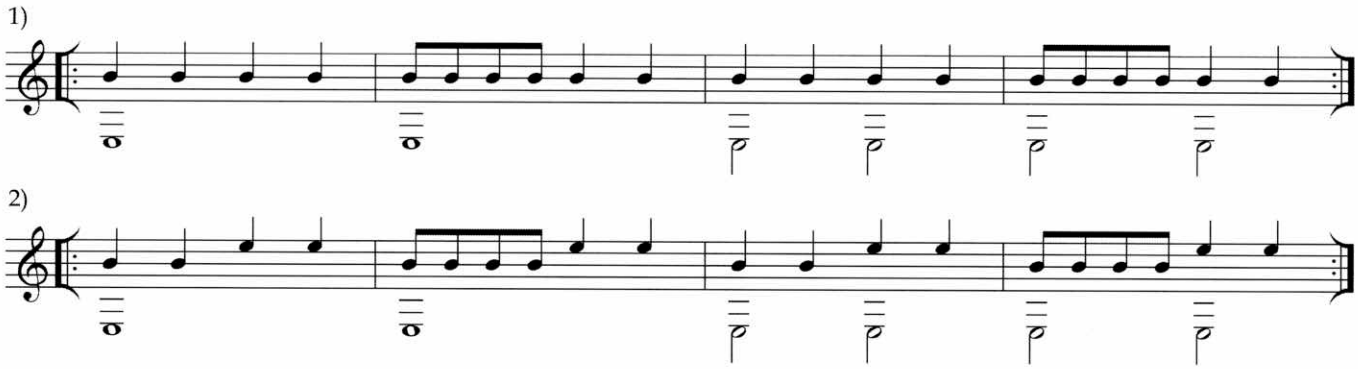
More advanced, scale-based string crossings, melodic and metric considerations for finger repetition, and further alternation techniques and practice methods (including rest stroke, rest-stroke / free-stroke mixture, and velocity fingerings) are explored in Part 2.

Lesson 10—Finger Alternation Accompanied by the Thumb

balance and independence between the thumb and fingers

This lesson explores shared-string finger alternation accompanied by the thumb (which now no longer rests on a string to support the hand).

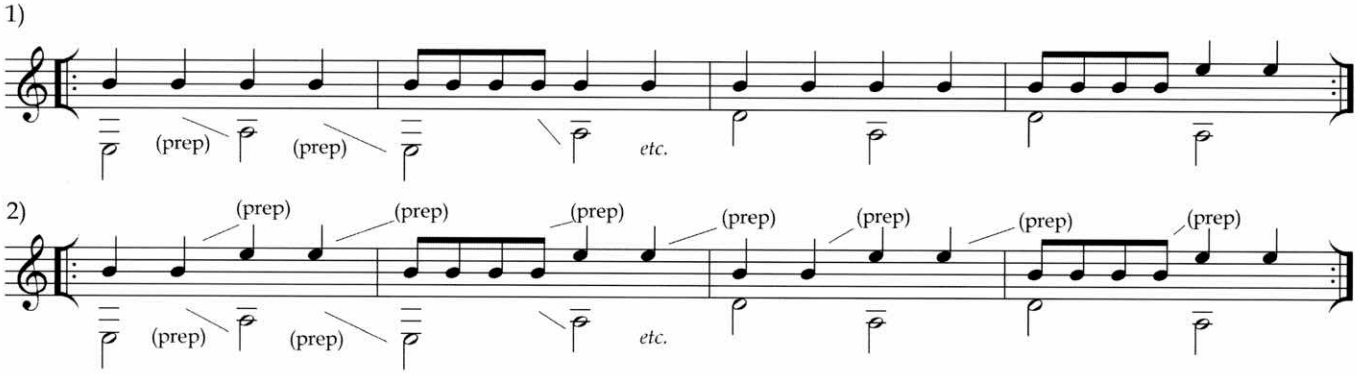
- Explore the independence and balance of the thumb and fingers, practicing with strict **im—mi** and **ma—am** alternation (**Ex. 1**):



Bear the following in mind:

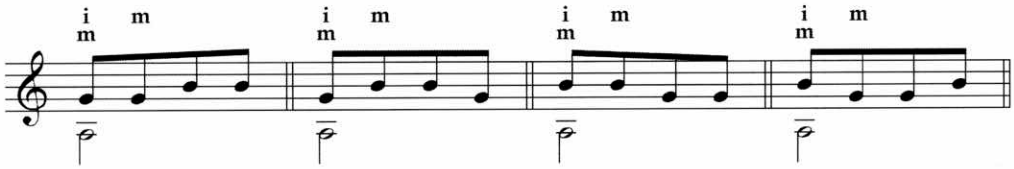
- don't allow the thumb stroke to affect the sound of the fingers; as an initial step, play the fingers alone before adding the thumb
- place your attention on the sound of the fingers, aiming for consistent tone and dynamic
- add dynamics, practicing versions in which the fingers play consistently loudly while the thumb plays consistently softly, and vice versa
- be sure to use an arm movement for each string crossing—the thumb adjusts the angle it makes with its string
- prepare each new string with the lead finger

- Add string crossing with the thumb, practicing in the same way as the previous exercises and preparing the thumb ahead of each string change as well (this will take a little thought) (**Ex. 2**):



- Here are four relentless string-crossing patterns typical of exercises devised by Francesco Tárrega (**Ex. 3**)—repeat each measure as many times as needed, focusing exclusively on the on the consistency of sound of:

  a) the fingers
  b) the thumb



Also explore these exercises with **ma**.

Practice Routine

Work on Ex. 1-3 each day until comfortable (a week or two).

NOTES

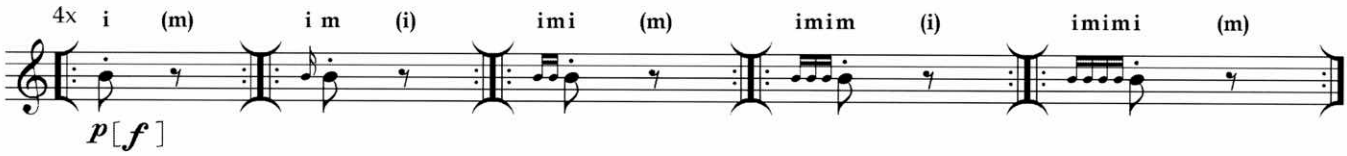
While we wouldn't default to **ma** alternation in normal playing, practicing alternation with **ma** and **am** has a beneficial collateral affect on the adjacent **im** finger pair.

Lesson 11—Developing Alternation Speed

precise preparation and lightness of touch · prolonged alternation

In this lesson, we'll look at a number of exercises for increasing alternation speed and rhythmic control. The main issues concern the return of the fingers to the string, the precise preparation of the contact points, and overall lightness of touch.

Efficient-Return Staccato Exercise—following each fast group, the next finger to play prepares on the string as quickly as possible (creating a sharp staccato) (**Ex. 1**):



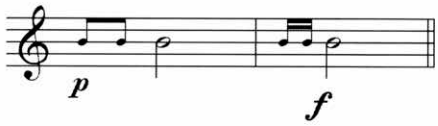
Precise preparation of each finger and a light touch are essential for this exercise (note that each measure begins with the same finger to help develop a precise and consistent contact point on the fingertip and nail).

- rest the thumb on a lower string to support the hand
- explore adjusting the hand position with a subtle clockwise rotation of the forearm
- play each measure at a ***piano*** (light) dynamic level until comfortable, then play a ***forte*** version
- After playing each rhythmic group, the hand should feel relaxed (though without losing finger curvature)—consciously check for this

Practice with both **im** and **mi** alternation, since they do not feel the same, and with **am** and **ma**.

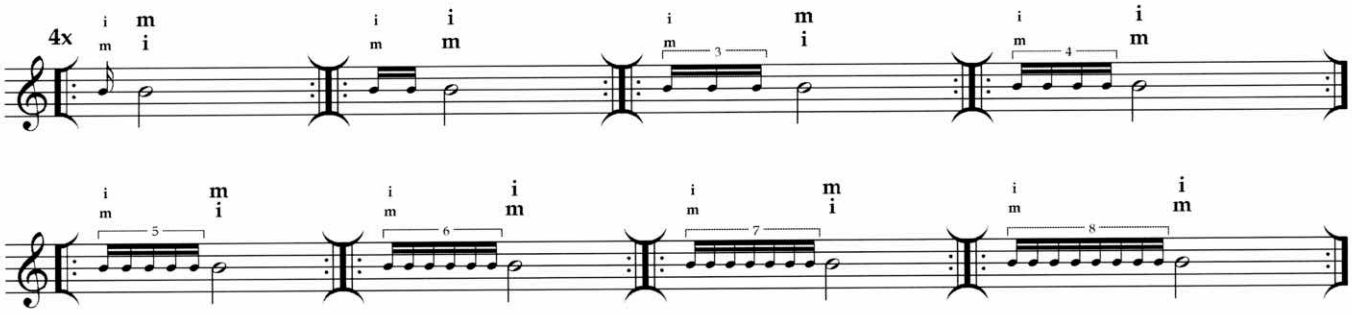
Sequential Addition with Slow-Fast Alternation

Develop increasingly longer sequences of rapid right-hand finger alternation with **im** and **mi** alternation, alternating between Slow-Soft and Fast-Loud versions of each rhythmic group, for example:



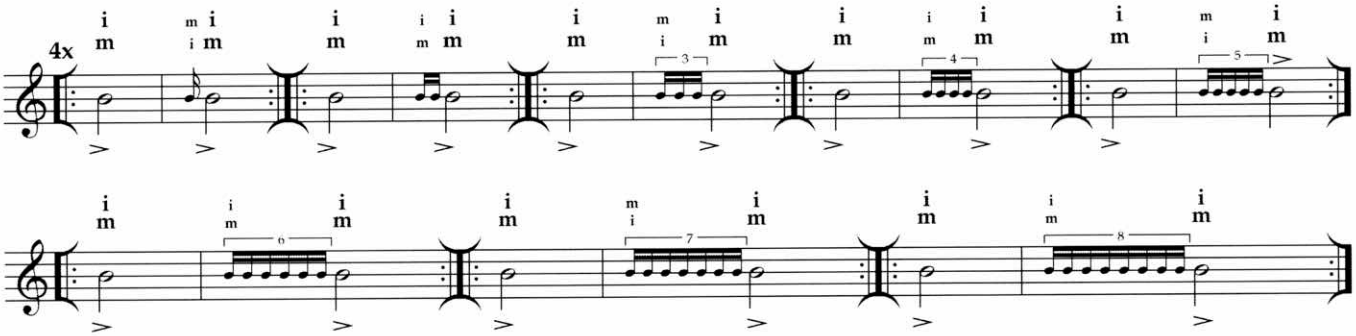
Repeat each measure four times (alternating between Slow-Soft and Fast-Loud versions) before moving on to the next measure (**Ex. 2**):

RH 11
Alternation

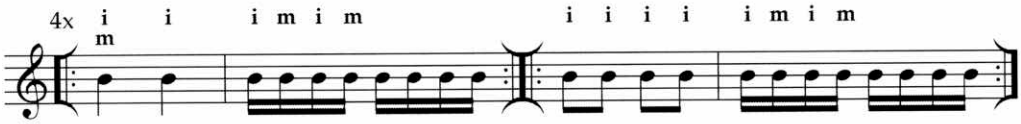


Sequential Addition with Slow-Fast Alternation

- Preface each rhythmic group with a long accented-note always played with the same finger (to feel and focus on a single finger of the alternating pair throughout the exercise) (**Ex. 3**):

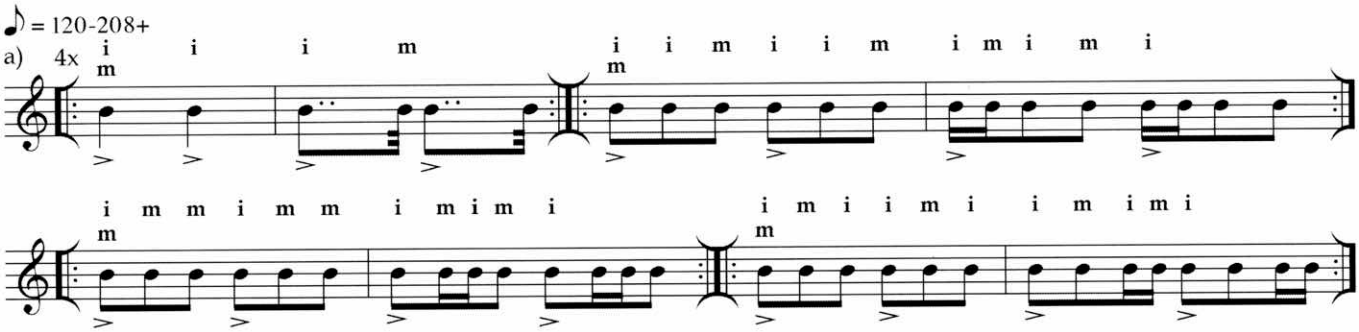


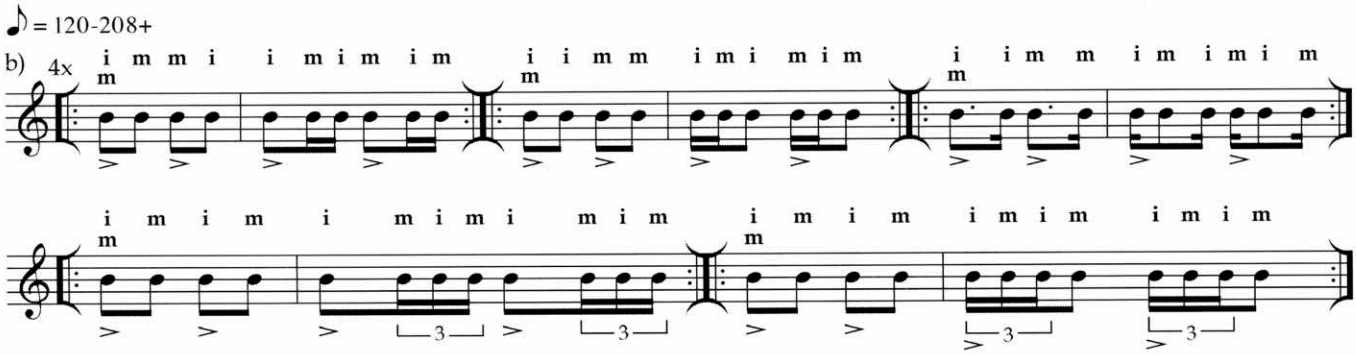
- Another exercise along the same lines (again, practice for **mi** as well) (**Ex. 4**):



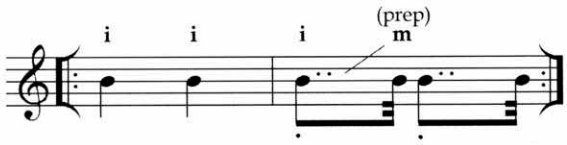
Rhythmic Variation

Pay careful attention to the fingering and accentuation indicated (**Ex. 5**):





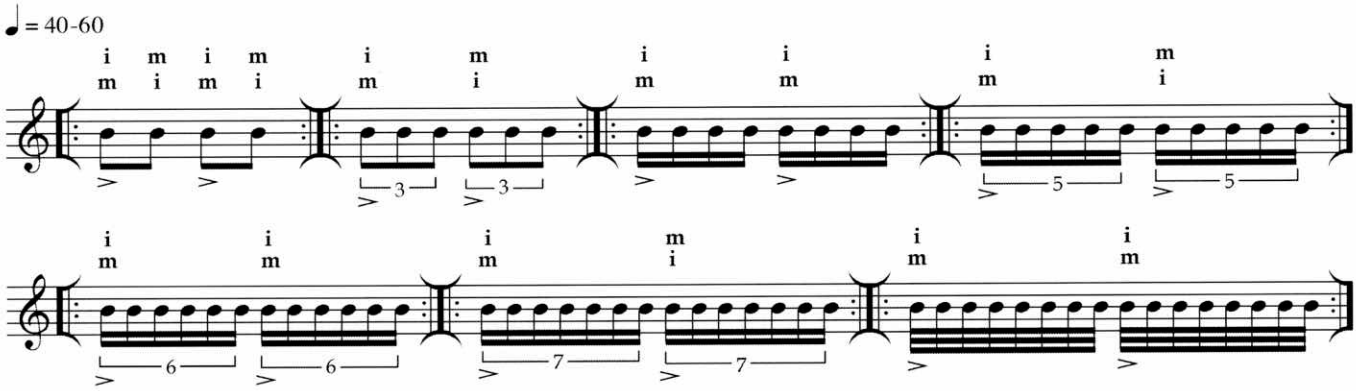
- Also practice the second measure of each of these exercises with staccato articulation on the long notes, preparing the next finger to play on the string as soon as possible. For example:



- Develop longer spans of alternation, starting at an overall slow tempo and playing along with a metronome for accuracy (this exercise is also good practice for switching between beat divisions) (**Ex. 6**):

Prolonged Alternation—Metrical Groupings and Accentuation

Play each measure twice, observing the accents and fingering indicated.



Over time, work-up the complete exercise to your maximum controllable speed.

Also practice this exercise with each finger individually as well as with **p** individually (on string ⑤).

Practice Routine

After spending some time exploring the initial staccato alternation exercise, cycle through the remaining exercises over the following six-day cycle, ending the routine with the prolonged alternation exercise (**Ex. 6**) at your fastest comfortable tempo:

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Ex. 1 **Ex. 2** **Ex. 6**	**Ex. 1** **Ex. 3** →	**Ex. 4** **Ex. 5a** →	**Ex. 4** **Ex. 5a (stacc.)** →	**Ex. 4** **Ex. 5b** →	**Ex. 4** **Ex. 5b (stacc.)** →

Practice each exercise with both **im** and **mi** alternation. In addition, for general right-hand control, spend a few minutes working on **ma** and **am** alternation (this can be accomplished with the initial staccato alternation exercise).

Use the Practice Grid provided in Appendix 3 to keep track of things.

Significant development of controlled and relaxed alternation at speed is a something that takes place over an extended period of time. Once these exercises become genuinely comfortable and controllable (which may take several weeks or more) incorporate some basic alternation bursts into your warm-up routine to maintain the technique, periodically revisiting the entire practice sequence to further develop the technique as needed.

NOTES

Further exercises along these lines are explored in Part 2.

Again, although one would probably not choose **ma** or **am** alternation for scales or passagework, this is nevertheless worth practicing for the enhanced control it provides not only for the non-independent finger pair but also for the adjacent **im** finger pair.

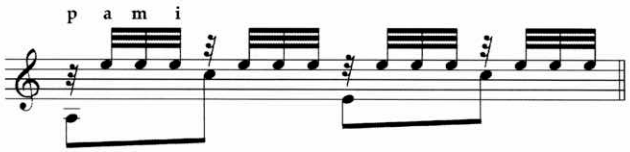
To help develop a precise return of each finger, it's useful to practice on an inner string (as indicated in the exercises) rather than on the first string.

Rhythmic Variation
It can be difficult to play with precise rhythm at fast tempos. Practicing rhythmic groupings with metric accentuation along with a metronome helps develop the ability to play both quickly (forcing speed during shorter notes and promoting control and relaxation on the longer ones) and with accurate rhythm.

Prolonged Alternation
Practicing with each finger individually helps develop raw alternation speed and prepares for the later study of velocity fingerings.

Further development of fast alternation technique, including refinements to the hand position, is explored in Part 2.

Lesson 12 — Tremolo



technical development sequence · optimizing the hand position · **am** compound stroke · **ami**—**amip**—**pami** at speed · staccato practice

While used relatively rarely, tremolo technique is nevertheless the principal feature of some the most evocative pieces in the guitar repertoire. The technique can, however, also be elusive. In this lesson we'll explore the process of developing an effective and reliable form of the technique.

The overall process is as follows:

1) establish a hand position that allows **a**, **m** and **i** to play on a single string with equal facility
2) develop the **am** compound stroke on a shared string (this may take several weeks of practice)
3) establish **ami**, then **amip** and, finally, **pami** at speed (see Notes)
4) refine the rhythm
5) develop the thumb (which must move between the bass strings without interfering with the position, action, and sound of the fingers)
6) develop movement of the fingers between the treble strings
7) add the agogic and dynamic inflexion required for rubato and phrasing
8) add a performance context

Since the precision required for executing a tremolo on an inner string is significantly greater than that required for string ①, each exercise will need to be established first on string ① and then practiced again on string ②.

We'll explore the first three steps here and reserve the remainder for Part 2.

1 Hand Position

The optimal hand position for playing tremolo is based on two factors:

1) alternation of the three fingers on a shared string
2) simultaneous movement of the thumb between the strings

As with regular right-hand shared-string alternation, we do not change the basic hand position to accommodate the three fingers on a shared string. Again, a subtle adjustment is made to the forearm contact-point to bring the three fingers onto a shared string (resulting in subtle changes in their relative curvatures).

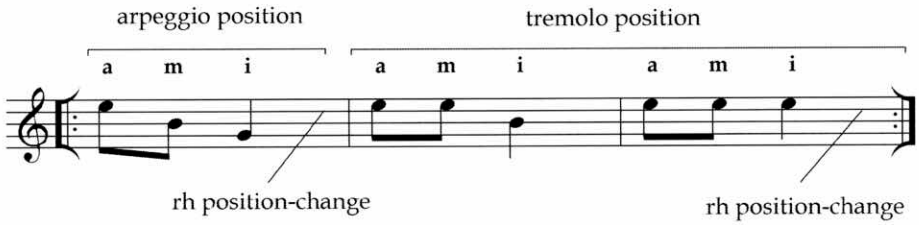
Thumb movement between the strings is explored more fully in Part 2.

Position of the Thumb Relative to the Strings

It's essential to establish a hand position that favors the weak finger-pair **am**—the much more agile **i** finger can easily accommodate a more significant adjustment of its curvature. Proceed as follows:

1) place the fingers and thumb one-per-string in standard arpeggio position
2) take **i** and **m** off their strings, leaving **a** and the thumb prepared on strings ① and ④ respectively
3) carry **m** to the first string by making a small forward movement of the arm, pivoting on **a** and **p** (**i** is now optimally positioned to play on string ② rather than string ③)
4) bring **i** onto the first string *without* moving the hand or arm—it will be a little straighter than usual at its middle joint

- Switch back and forth between the standard arpeggio position and the tremolo position (changing position only as indicated) (**Ex. 1**):



Once in position, squeeze the string a few times paying careful attention to the contact point of each finger—it's essential that very precise contact points are cultivated if the tremolo is to be effective.

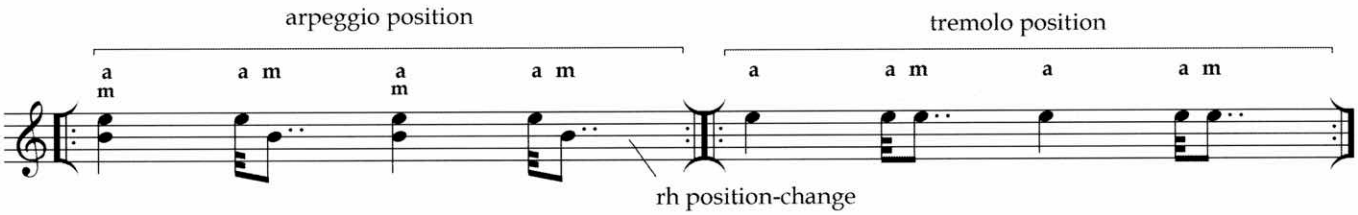
Also explore establishing the tremolo hand-position on string ②—in this case **a** releases from its string and is carried by a small arm movement to string ②; **m** and **p** pivot and **i** again straightens a little.

Go through the hand-position routine each time you work on the exercises in this lesson.

2 **am** Compound Stroke

Explore the shared-string **am** compound stroke.

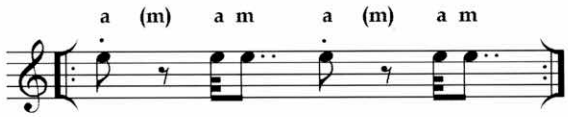
- Establish the compound stroke across two strings as an arpeggio, then apply it to a shared-string position (**Ex. 2**):



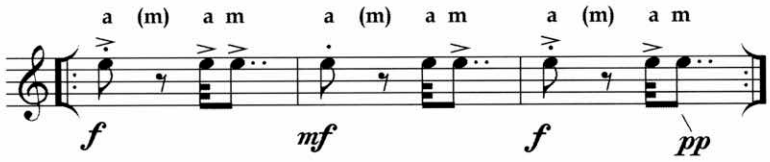
In the tremolo position, **a** prepares on the string while **m** can only prepare close to the string (and is then pulled onto the string by the plucking action of the **a** finger)

Be sure to cultivate a precise and consistent contact point for the **m** finger and to practice this (and the remaining exercises in this section) on string ② as well.

- Explore the timing and placement of the **m** finger—the staccato is created by the preparation of **m** on the string. Listen carefully to the length of the notes played by the **a** finger and strive for consistency (**Ex. 3**):



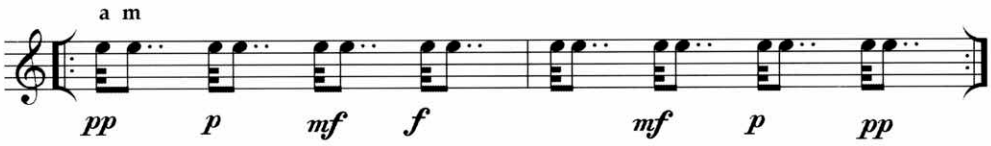
- Use Dynamics and Accentuation to increase control of the **m** finger. Observe the accents exactly as written (the final measure is quite challenging) and again carefully monitor the length of the notes played by the **a** finger (**Ex. 4**):



- Then practice with the following dynamic schemes (**Ex. 5**):

  1) **m** consistently louder than **a**
  2) **m** consistently softer than **a** (again, this is quite challenging)
  3) both fingers at the same volume

- Play both fingers with equal volume within an overall crescendo and diminuendo (**Ex. 6**):



Monitor the sensation in the hand as the dynamic level rises and falls over the course of the exercise—each gesture should feel essentially the same.

Again, the exercises in this section should also be practiced on string ②.

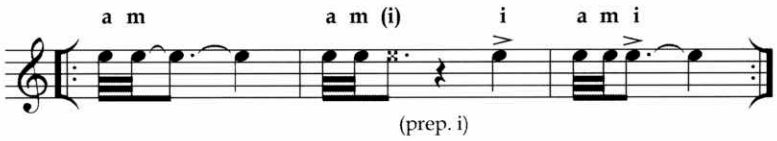
Work on these exercise each day until comfortable before moving on to the next section (this may take several weeks).

3 **ami—amip—pami** at Speed

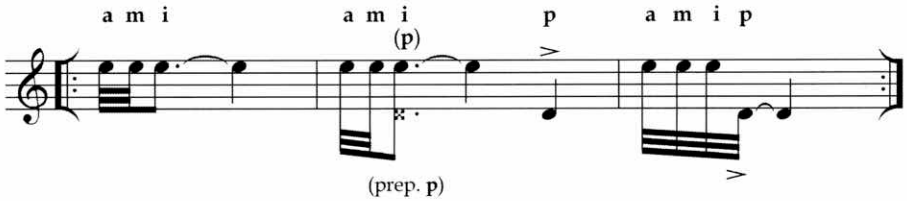
Once the **am** compound stroke is comfortable, add the **i** finger and then the thumb to complete the full tremolo pattern.

- Sequential Addition—gradually develop increasingly longer sequences of actions:

First, add the **i** finger (**Ex. 7**):

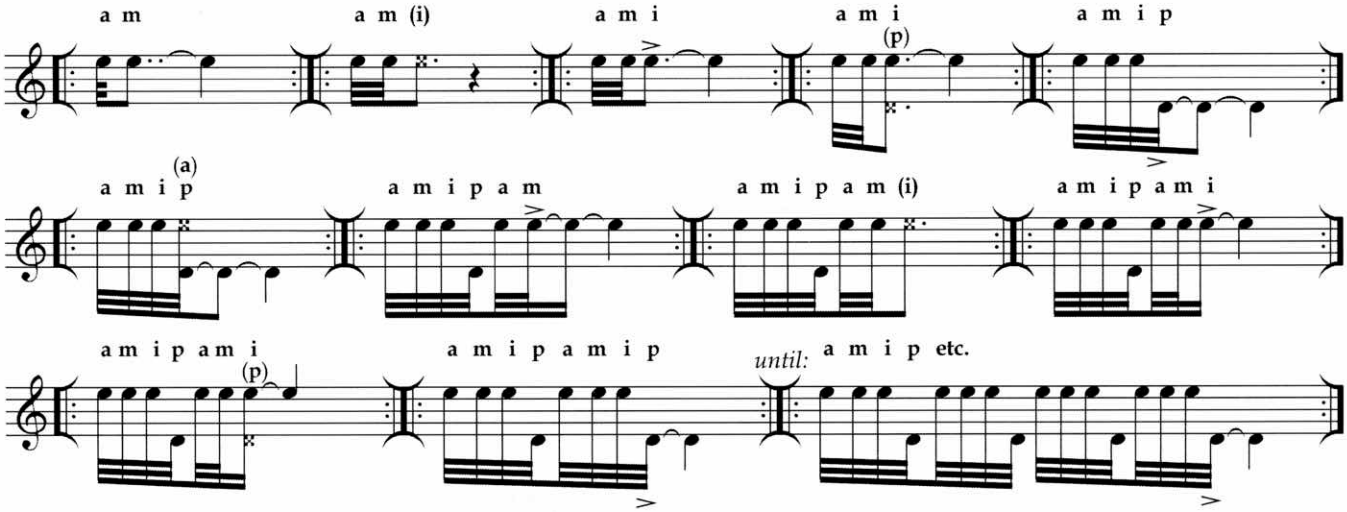


Then the thumb (**Ex. 8**):



Continue in the same way, adding successive preparations and plucking actions of **am**, **i** and **p**, until you have four cycles of the complete pattern (**Ex. 9**):

(The details of the preparation and return sequence are described in the Notes at the end of this lesson.)

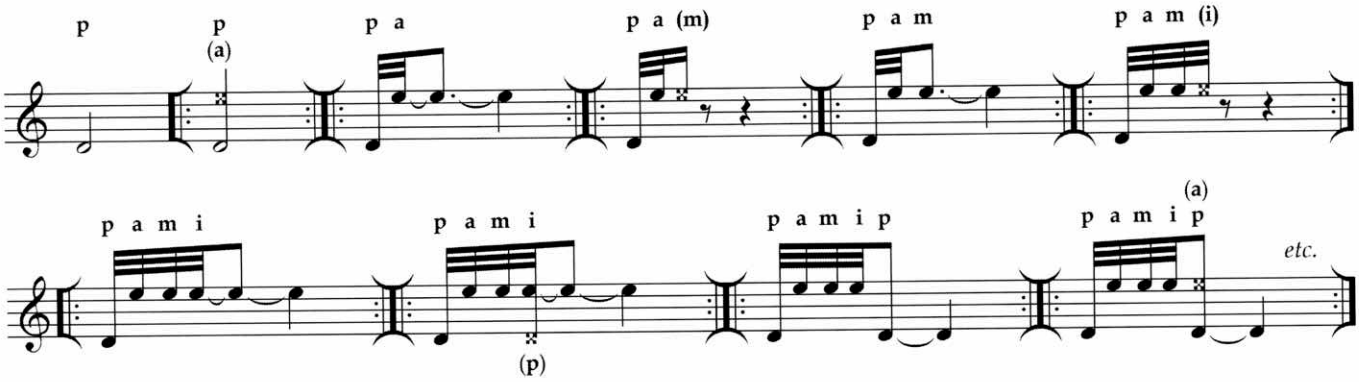


These movements can be observed, but not consciously controlled; they're simply an internalized gesture resulting from appropriate practice.

Once you're able to comfortably cycle the pattern you should be able to observe the following:

- none of the fingers move particularly quickly
- the three units—**am**, **i** and **p**—cycle back and forth independently of one another
- the three units are in constant motion, either moving through the string or returning to it

- Build the pattern starting with the thumb, adding successive preparations and plucking actions of **am**, **i** and **p** until you have four cycles of the complete pattern (**Ex. 10**):

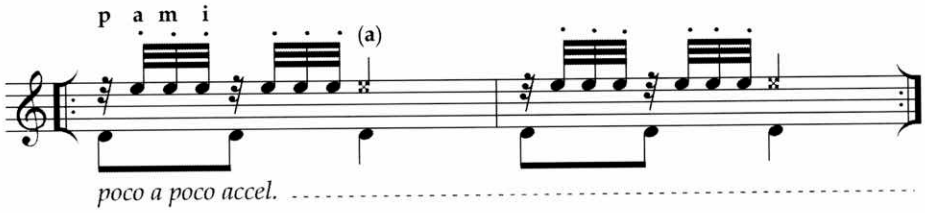


Again, you should be able to observe that each of the three units (**p**, **am** and **i**) move back and forth independently of one another at a relatively moderate speed and are in constant motion (refer to the Notes section for more on this).

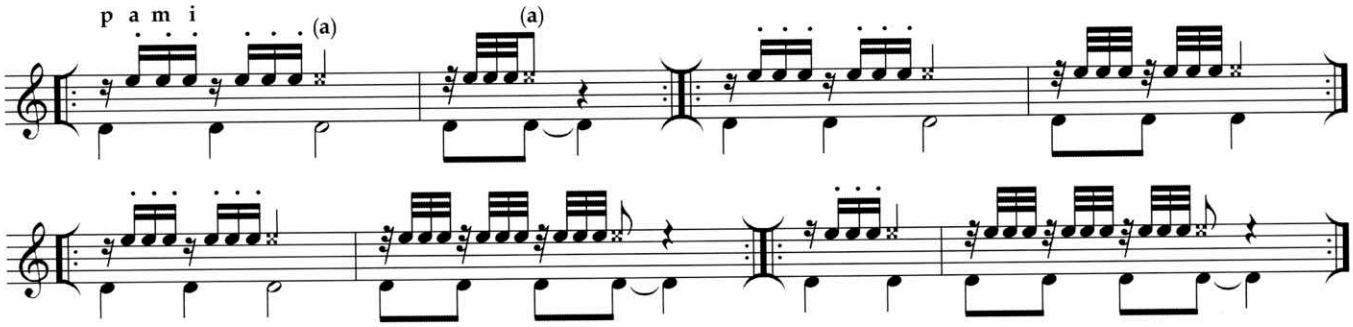
Staccato Practice

- Prepare the fingers on the string as quickly as possible to produce a series of staccato notes:

  1) start at a moderate speed and gradually increase the tempo until the staccato disappears (this is the tempo at which you're no longer able to prepare the fingers ahead of time) (**Ex. 11**):



  2) alternate back and forth between a staccato version at a moderate tempo and fast non-staccato bursts (**Ex. 12**):



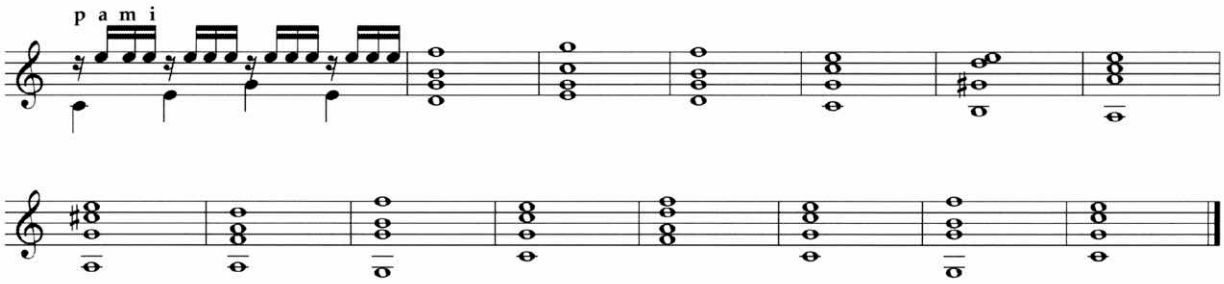
Again, all of the exercises in this section should also be practiced on string ②.

Practice Routine and Contextualization

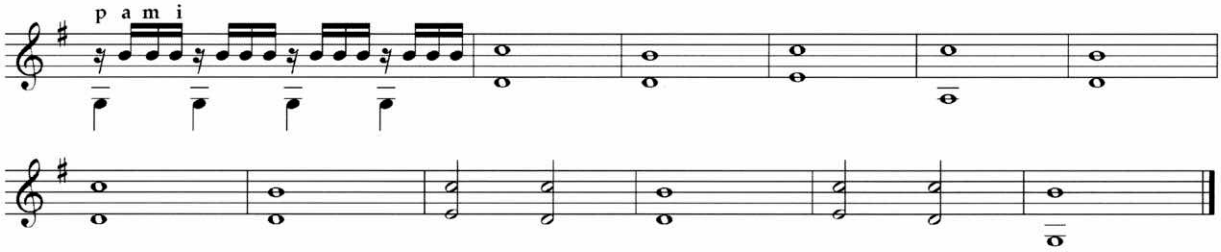
Warm-up with the exercises in sections 1 and 2 and then work on the three patterns (**ami—amip—pami**) each day. When comfortable, add the staccato exercises (Ex. 11 & 12) to the routine and be sure to practice on both strings ① and ②. A Practice Grid is provided in Appendix 3.

A simple musical context can be provided by applying the tremolo to a chord progression, such as those provided at the and of Lesson 7:

(From CARULLI, Op. 114 No. 1)



(From CARULLI, Op. 114 No. 2)



NOTES

Hand Position
Avoid over-straightening the **i** finger, however, since this can impair the action of **ma** (the same goes for over-curling **ma**).

am Compound-Stroke
The main technical challenge in developing an effective tremolo lies in the control and evenness of the **m** and **a** fingers, timbrally, dynamically, and rhythmically. As with arpeggio technique, the **am** sequence is played as a Compound Stroke—**a** brings **m** onto the string as part of a single compound plucking action. Unlike arpeggio technique, however, tremolo technique of course requires that both fingers play on the same string. This makes a greater demand on the Compound-Stroke technique, requiring very precise timing of both the **a** finger and the **m** finger.

As with arpeggio technique, there are a couple ways to rhythmically inflect the rhythm of the **am** Compound Stroke: 1) by adding momentary tension in the **m** finger to delay its stroke; 2) by varying the distance between the **m** finger and the string. Both of these surely come into play during a tremolo, though it's probably impossible to determine an exact formula to describe how this works. Again, we simply listen carefully to the rhythms we're

playing and through repetition learn to associate the desired one with the accompanying sensation produced in the hand.

ami—amip—pami at Speed
The precise preparation and return sequence is as follows:

> **p** prepares on its string as **i** plays
> **am** return together as **p** plays (**a** prepares on the string, **m** close to the string)
> **i** returns as **am** play and prepares close to the string:

The fingering sequence in this section focuses on the main challenge of the pattern—the **am** Compound-Stroke—and works back from that toward the thumb stroke (rather than beginning with the thumb and having to immediately deal with the trickiest part of the pattern).

Staccato Practice
Staccato practice develops the speed of finger return and preparation and is a further method of increasing the overall speed of the tremolo.

Tremolo technique is explored further in Part 2.

Lesson 13—Rest Stroke

rest stroke with the fingers · single-finger rest-stoke string crossings · free-stroke / rest-stroke mixture

The rest stroke is a mode of plucking used often for melodic playing and for accentuation. The string is plucked with a straighter than normal finger, with the result that it comes to rest against the next lowest string after completing the stroke. The resulting sound is warm and full.

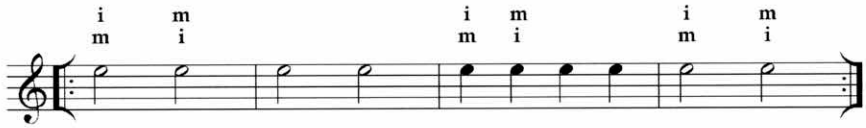
Rest Stroke with the Fingers

A basic rest stroke requires an adjustment to the curvature of the plucking finger. A good approximation can be arrived at as follows (**Ex. 1**):

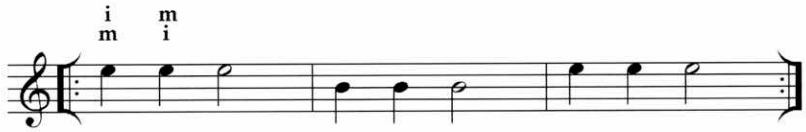
1) place the fingers one-per-string in the normal hand position (i.e., with **i** on string ③) but with the thumb on string ⑥
2) without moving the hand, move **i** over to string ①

The **i** finger is now straighter at its middle joint, more curled at its main knuckle joint, and in position to play a rest stroke on string ①.

- Experiment with the attitudes of the **i** and **m** fingers required for rest-stroke alternation on the first string, resting the thumb on the sixth string for support. The tip joints should remain relatively firm and not be allowed to bend back on themselves (at least for now). The fingers move in coordinated alternation—as one finger plucks the other finger seeks out the string (**Ex. 2**):



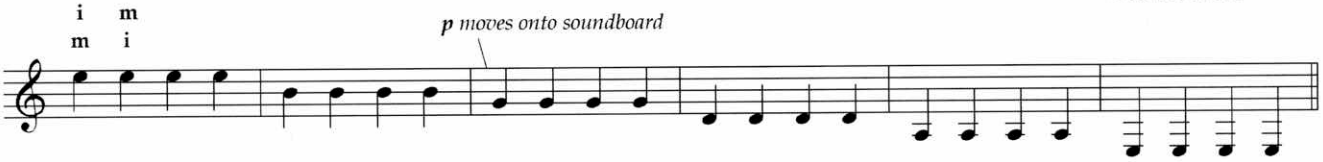
- To play on string ②, make a small movement of the arm to bring the fingers onto the string without changing their curvature (**Ex. 3**):



String crossings requires a small arm movement for each new string and a corresponding re-angling of the supporting thumb (to avoid forcing the wrist to change curvature from string to string).

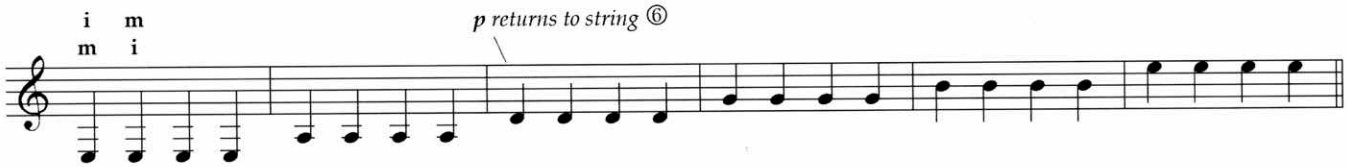
Movement across more than two strings requires adjustment to the forearm contact-point on the upper bout of the guitar.

- In general, when **descending** across the strings, the thumb will need to move onto the soundboard once the fingers reach string ③ (**Ex. 4**):



Once the thumb moves onto the soundboard, allow it to adjust its angle rather than continue to move increasingly away from the strings. Otherwise, it will be difficult for it to regain contact with the strings when needed.

- When **ascending** across the strings, the thumb will move back onto string ⑥ once the fingers reach string ④ (**Ex. 5**):



Plucking with the Fingers on the Wound Strings

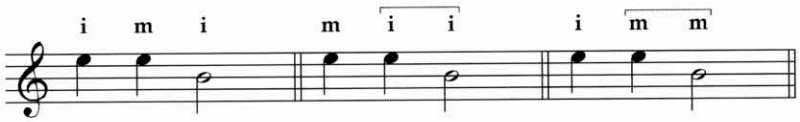
Whether playing rest stroke or free stroke, the angle of attack must be adjusted when playing on the wound strings. Otherwise a scraping sound results as the fingernail moves along the windings and passes through the string. In both rest stroke and free stroke, the treble strings are played with the usual oblique angle of attack. On the wound strings, however, the attack is much straighter, with a contact point further along toward the center of the nail, rather than at the very corner. The goal is for the fingernail to move through the string without also moving along it.

The larger the windings, the more pronounced the effect and the lower the string the greater the adjustment that needs to be made. Descending across the six strings therefore involves a gradual adjustment from the oblique attack to a straighter attack; ascending across the strings requires the opposite. The movement incorporates slight lateral movement at the wrist, as well as movement at the elbow and shoulder.

Single-Finger Rest-Stroke String Crossings

Rest-stoke technique provides additional possibilities for descending string crossings—since the last finger to play on the higher string comes to rest on the next-lowest string and the previous finger is also free to play, either finger may be used to accomplish the string crossing.

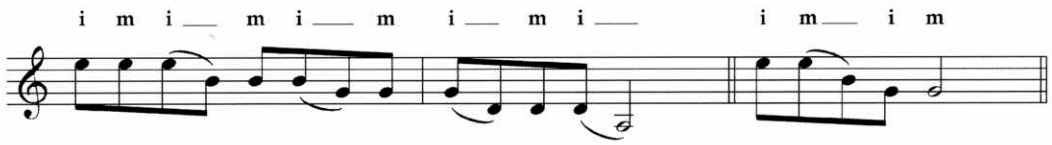
- Any of the following fingerings can be used for a descending string-crossing when using **im** rest-stroke alternation (**Ex. 6**):



(Be sure to use the arm to assist each string crossing, especially when the **m** finger leads.)

- This technique can be used to correct awkward string crossings in a descending passage. For example (**Ex. 7**):

RH 13
Rest Stroke



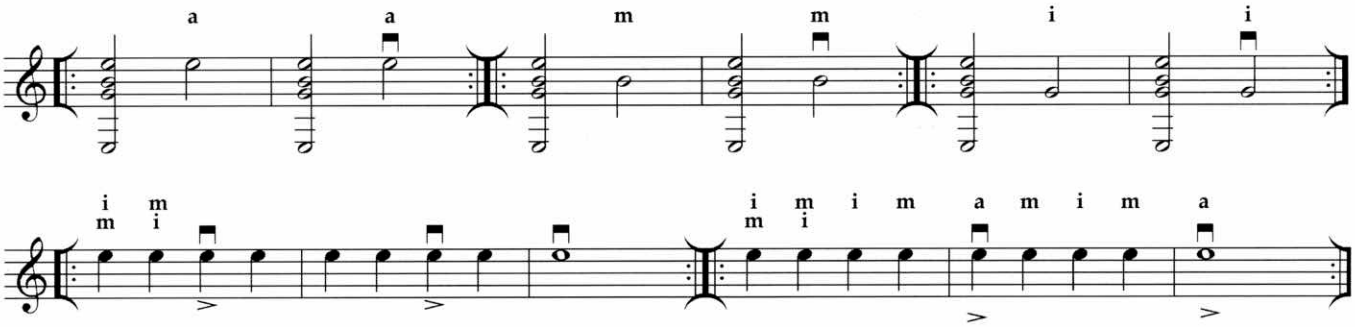
Free-Stroke / Rest-Stroke Mixture

Rest stroke can often be used to good effect within an otherwise free-stroke texture. Such situations include an isolated accent, a melodic crescendo, a particularly expressive melodic note (or series of notes), or a single-finger string-crossing (as just described).

Here are two ways to use an isolated rest stroke without altering the overall free stroke hand position:

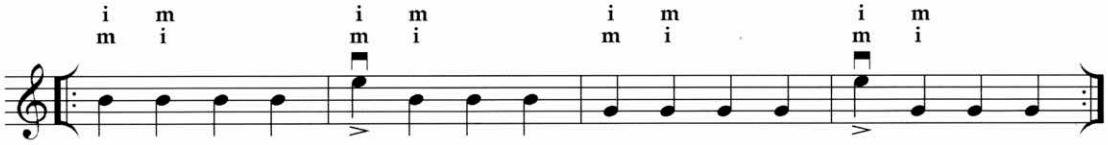
1) straighten the rest-stroke finger a little at its middle joint
2) allow the tip joint to bend back on itself (*hyperextend*)

- Use the following exercises to explore isolated rest strokes within an overall free-stroke texture and hand position (**Ex. 8**):

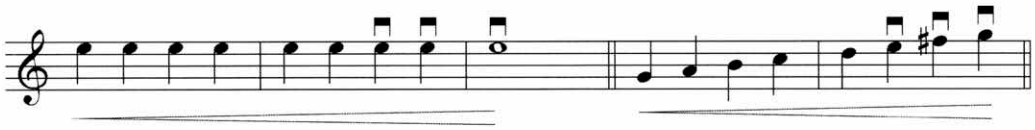


When time permits (on the half-notes) an isolated rest stroke can be helped along by small leftward movement at the wrist or even by a small movement of the entire forearm (with much, if not all, of the free-stroke curvature of the finger retained).

- It isn't necessary to adjust the forearm for a string crossing when **i** or **m** play an isolated rest stroke on a higher string (this is especially true of the agile **i** finger) (**Ex. 9**):



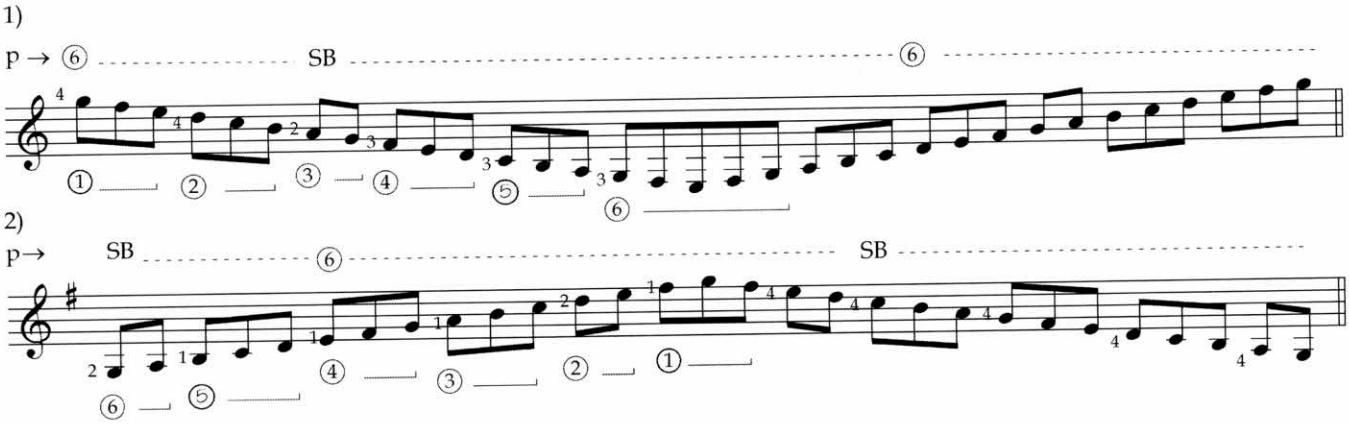
- It can be useful to switch from free stroke to rest stroke to enhance a crescendo (and the reverse for a decrescendo) (**Ex. 10**):



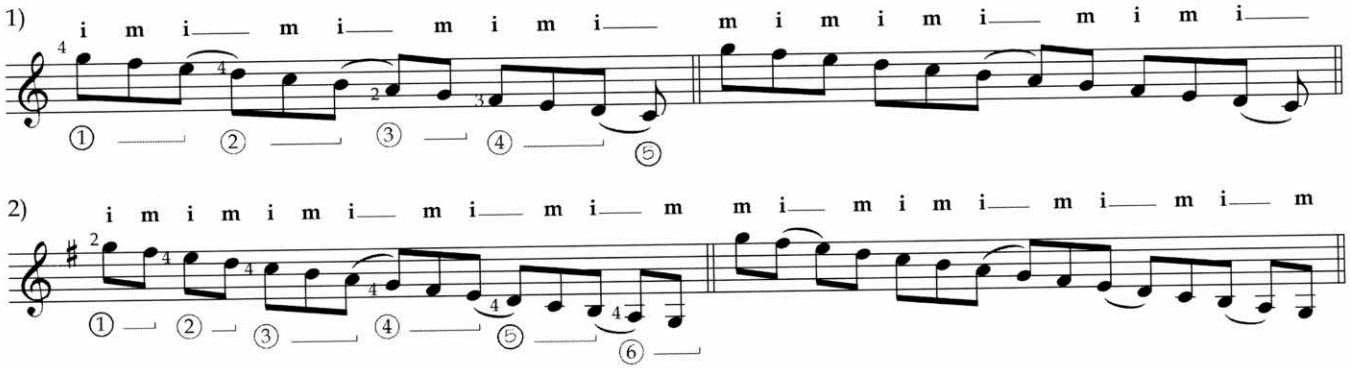
Practice Routine and Contextualization

After exploring the examples provided in this lesson, work on the following material to internalize the rest-stroke technique:

1) Single-line melodies and standard scales rest-stroke only, taking care to adjust the thumb position as needed (SB = soundboard):



2) Standard scales with single-finger string crossings:



3) Iconic studies and other similar pieces that provide an opportunity to systematically incorporate rest stroke within an otherwise free-stroke texture, such as:

Fernando SOR	*Study in b-mi Op. 35, No. 22*
Matteo CARCASSI	*Etude in A-ma Op. 60, No. 3*
	Etude in F-ma Op. 60 No. 16
Francisco TARREGA	*Adelita*
	Lagrima
Leo BROUWER	*Etude simples No. 7*

(Using rest stroke for contextual practice, not necessarily as a means of actually performing these pieces.)

NOTES

One might well ask, why not use rest stroke as the default stroke? One reason is that extended use of the rest stroke tends toward a hand position that compromises the simultaneous use of the thumb. Another, is that musical textures often don't allow it—since a rest stroke silences an already-sounding lower adjacent string, it isn't appropriate for arpeggio passages, counterpoint, or even for melodic passages supported by a well-defined accompaniment texture on the inner strings (an exception to this is explored in Part 2 however). Nevertheless, the rest stroke offers expanded options, especially for melodic tone and accentuation, and is often used for isolated single-line melodies, loud melodic passages and scales, accents, and for color.

The relatively recent move back from rest stroke to free stroke as the basis of right-hand technique remains, for some teachers, a controversial issue. Nevertheless, as discussed in Lesson 3, there are a number of pedagogical reasons that lead us to regard free stroke as the foundation of right-hand technique and playing position. And, as just touched upon above, there are musical reasons as well.

Stylistic and historical reasons also come into play. Systematic use of the rest stroke occurred during the latter part of the nineteenth century and was in part a technical response to the predominantly melodic musical style employed by those who used it at that time, playing on gut strings and without the use of fingernails. It was also a reflection of the flamenco guitar style that influenced such Spanish guitarist-composers as Thomas Damas and Julian Arcas. At its height, as described in guitar methods written by students of Francisco Tárrega (Emilio Pujol and Pascual Roch), during the early years of the twentieth century, rest stroke was advocated for *every* note of a composition, including arpeggios and tremolos, excepting only simultaneously-plucked adjacent strings and chords. As the century progressed, however, the use of the stroke, as demonstrated by successive generations of performers, became increasingly flexible, eventually becoming an option rather than a default mode of right-hand playing technique.

Free-Stroke / Rest-Stroke Mixture

Depending on the physiology of the individual fingers, some combination of straightening and hyperextension may be necessary—the flexibility of the tip joints can vary tremendously from player to player, as well as from finger to finger (use the stretching exercises provided in the earlier Warm-Up section).

Rest stroke with the thumb and the use of rest stroke and rest-stroke / free-stroke mixture in fast scales are explored in Part 2.

Lesson 14—Introductory Rasgueado Exercises

single-finger strumming (extensor development) · basic **cami** rasgueado

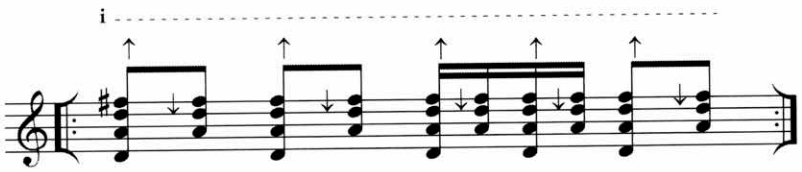
There are two very good reasons for classical guitarists to practice rasgueado (strumming):

1. the technique is used from time to time in the repertoire
2. the technique exercises the right-hand extensor muscles and therefore improves general right-hand control and alternation speed

In this lesson we'll explore the technical benefits of single-finger strumming and preliminary **cami** rasgueado (saving more advanced techniques for Part 2).

Single-Finger Strumming

- Exercise each finger (**i, m, a** and **c**) individually using alternating down-strums and up-strums, aiming for equally strong up- and down-strokes throughout (rest the thumb on string ⑥ for support and to restrict the strumming action to the fingers only) (**Ex. 1**):



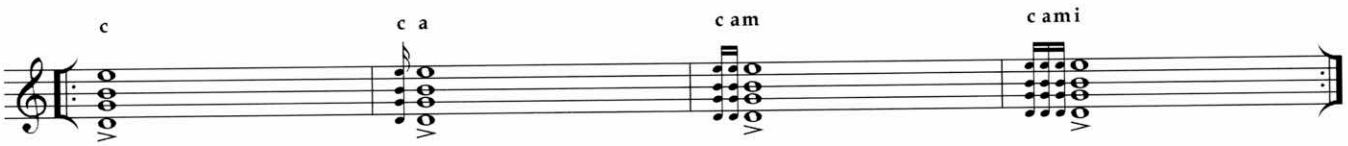
(Note that only the treble strings are normally sounded by an up-strum).

- Also practice down-strokes with each finger while holding the others against the palm of the hand.

*Basic **cami** Rasgueado*

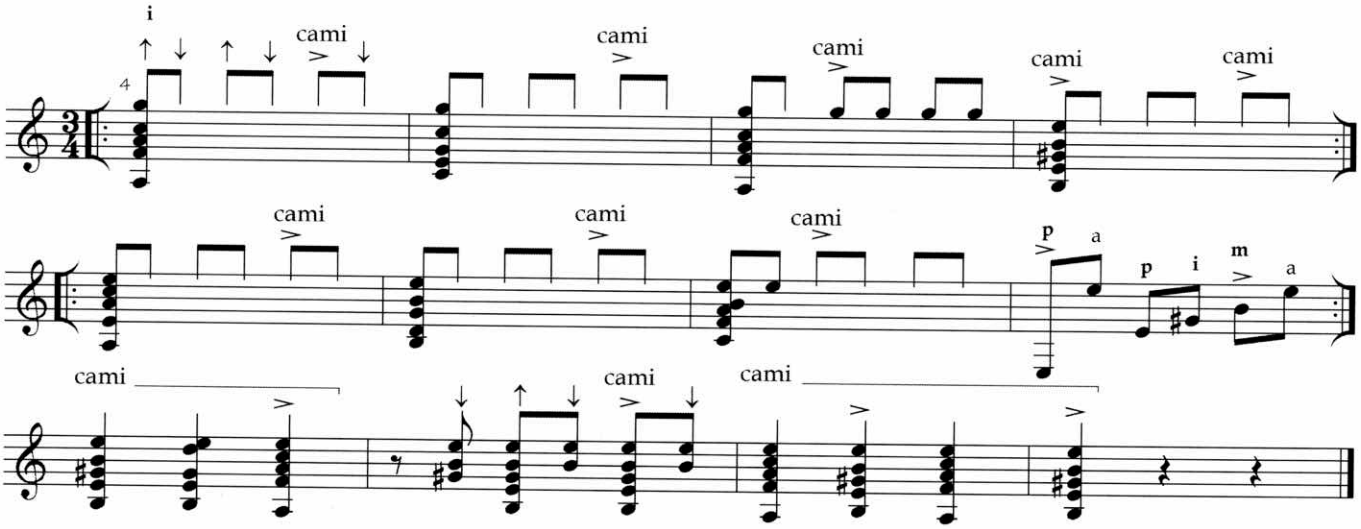
- Develop a basic **cami** strumming action as a preliminary to learning the full **camii** flamenco rasgueado (explored in Part 2). Hold the fingers against the inside of the right-hand palm and vigorously flick them out and through the strings (again, resting the thumb on string ⑥ for support) (**Ex. 2**):

(Initially, practice this without the guitar.)



Practice Routine and Contextualization

Add the exercises in this lesson to your daily warm-up routine (c. 2′) and use the following simple flamenco *soleares* compás to help contextualize the technique:



NOTES

Single-Finger Strumming
Single-finger strumming is useful for exercising the extensor muscles of the hand and forearm. This helps maintain a balance between the flexor and extensor muscles, and can also help develop the speed of finger return (useful for developing alternation speed).

Rasgueado notation and terminology can be confusing—down-strums (toward the floor) are usually indicated with an upwards-pointing arrow, up-strums (towards the ceiling) with a downwards one (following the direction in which the fingers cross the strings pitch-wise, rather than the literal physical direction).

The Left Hand

The Left Hand—Introduction

In comparison to the sophisticated technique of the right hand, the left is often regarded as the guitarist's workhorse. Nevertheless, a considerable degree of sophistication and refinement is required for its various actions and this requires no less thought or attention than that given to the right hand.

The principal technical issues for the left hand are:

- optimal positioning of the hand and arm to precisely accommodate the wide range of fingerboard dispositions required in general playing and to deal with arm weight, gravity, and the upper-arm muscles
- coordination and independence (both between the fingers and between the hands)
- movement of the hand and fingers between and along the strings
- fine control of tension levels.

Again, I'll often use the term 'relaxed' since it connotes the correct sensation, though what I'm actually referring to is minimization of tension rather than complete relaxation.

Left-hand thumb technique, although rarely mentioned in the instrument's pedagogical literature, is of considerable importance to these issues and is explored in detail at the appropriate points.

Technical Sequence

The broad left-hand technical sequence followed in Part 1 is as follows:

1 Basic Position of the Left Arm and Hand (Lesson 15)

a) forming an anatomically-sound position of the arm and hand; utilizing weight and the upper-arm muscles
b) position and sensitivity of the thumb

2 Refinement of the Basic Hand Positions (Lesson 16)

a) parallel, rotated, and hyper-parallel hand positions
b) the weaker (less independent) fingers
c) placing block chords; sequential placement in arpeggio textures

3 Barres (Lesson 17)

a) developing the index finger
b) incorporating arm weight and the upper-arm muscles
c) additional barre types
d) maintaining barres over extended time spans

4 Precision, Tension, Coordination, and Independence (Lessons 18-22)

a) precise finger placement
b) control of the tension levels associated with various finger states
c) finger independence and 'fly-away' fingers
d) economical movement, touch, and sensitivity
e) coordination and independence of individual fingers and finger pairs
f) independence and coordination between the hands

5 Position Shifting (Lesson 23-26)

a) overcoming counterintuitive aspects of position shifting
b) shifting across and along the strings; role of the thumb and arm
c) gauging distances
d) fixed-scale practice
e) interval scales

6 Slurs (Lesson 27-30)

a) ascending slurs
b) descending slurs
c) three- and four-finger descending slurs
d) compound slurs

Left-Hand Only as Well as Hands Together

In normal playing, with both hands in action simultaneously, it's virtually impossible to accurately register the sensations present in either hand. It's therefore important that we explore each hand in isolation as part of our practice. Most of the exercises in this section should first be practiced without involvement of the right hand. Once the left-hand sensations have been accurately registered the right hand can be re-introduced.

Working on the Lessons

Be sure to explore and understand the text, exercises, and practice methods before adopting the Practice Routines and Contextualization material provided at the end of each lesson. Take patterns and exercises out of the full practice sequence as they become comfortable and maintain them as play-throughs as you continue detailed work on the remaining patterns and exercises. Once the material in a lesson is comfortable, use the suggested Contextualization material to periodically revisit and maintain the technique.

Practice Grids are again provided in Appendix 3 to help you keep track of things.

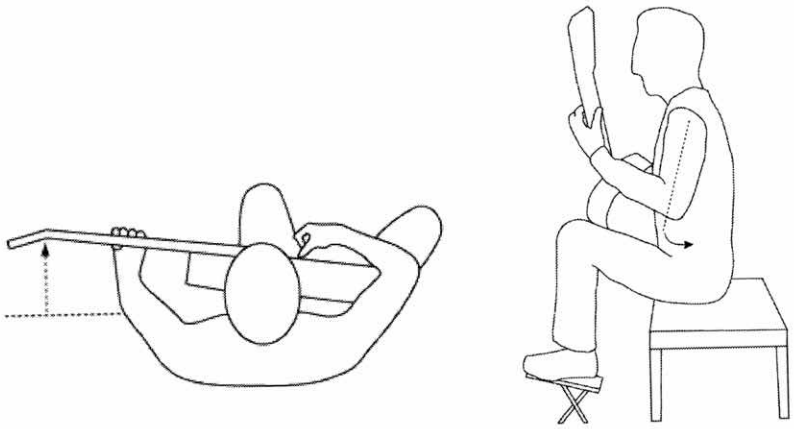
Lesson 15—Basic Position of the Left Arm and Hand

forming an anatomically-sound position of the left arm and hand · incorporating arm weight and the upper arm muscles · critical role of the left-hand thumb

Like the right hand, the basic position of the left derives from the grasping action of a fist, which again guarantees a natural alignment of the wrist and fingers through all of their joints.

Forming the Basic Playing Position

- Begin with the left arm hanging loosely with all joints from the shoulder through the finger tips relaxed, palm facing backwards.
- Bring the hand toward the fingerboard on string ④ in the fifth position by rotating the forearm and bending at the elbow.
- Make an additional small forward movement from the shoulder to bring the arm into a desirable forward position (to take advantage of arm weight):



- With the arm held in this forward position, make a tight fist with the fingertips held in toward the *base* joints of the fingers (see Notes)
- Relax the fist into a lightly-held position with the finger joints still quite curled, and slot the guitar neck between the thumb and fingers with the fingers positioned lightly along the string.

You should be able to observe the following:

- the shoulder and upper-arm muscles are relaxed (minimally tense)
- the fingers use only enough tension to remain on the string and retain their curvature
- the thumb is positioned behind the first and second fingers, is relaxed and only *lightly* touching the guitar-neck
- the wrist is no more than slightly curved
- the middle joints of the fingers are significantly curled; the main knuckle joints of the fingers are considerably less curled
- the arm is not held to one side or the other and simply hangs from the shoulder, providing a component of weight that acts on the string (see Notes)

Numerous modifications to this position are of course required to play the guitar (several of which will be explored in the next lesson).

The Left-Hand Thumb

Tucked away behind the fingerboard and out of sight, the left-hand thumb is probably the least discussed and least understood aspect of left-hand technique. Here are three basic requirements for optimal functioning of the thumb (which are probably counterintuitive):

1. Its contact with the guitar neck is light
2. It acts as a reference and balancing point for the fingers, not as an active participant in fretting notes
3. It responds to even the slightest change in position of the arm and hand

The tension level and position of the thumb relative to the hand and fingers should be constantly monitored, at least until a light contact and optimal positioning become habitual. Tension should be released at every opportunity and positioning should be checked and, if necessary, adjusted.

> With the fingers on the string(s), in any position or in any disposition, relaxing the thumb away from the guitar neck and gently returning it will almost certainly result in its optimal position. In general, if the thumb could pass through the guitar neck (as if playing an 'air guitar') the pad of its first phalange would almost always come into contact with the tips of the first and second fingers.

It's also essential that the thumb is mobile and responsive to the subtlest changes in the position of the arm and hand. It shouldn't act as a pivot or an anchor during a string change or any other change of position (normally)—doing so results in changes to the curvature of the finger joints, from the wrist through the fingertips, and this interferes with the balance of the hand and the equitable positioning of the fingers themselves.

At this point, take a few short passages from pieces in your current repertoire and explore the way you're presently using the thumb.

We'll explore the role of the thumb more fully in the following lessons.

NOTES

With the arm slightly forward, gravity can act upon its weight to provide a component of force into the fingerboard (this is a sophisticated topic and is explored more fully in later lessons, though see below).

Unlike the right hand, the basic left-hand position requires significant curvature at the middle joints but considerably less curvature at the main knuckle joints. This is somewhat subject to the lengths of individual fingers—longer fingers require less curvature at the main knuckle, shorter fingers require more.

Aiming the left-hand fingertips toward the base of the fingers creates maximum curvature at the middle joints; this is in contrast to the right hand, which requires curvature at the main knuckle (modeled by aiming the fingertips back toward the wrist).

With the shoulder joint relaxed, the elbow fixed and the fingers curled, fretting pressure can be assisted by the weight of the arm provided a sufficient angle is created at the shoulder (the elbow is forward of the perpendicular, as shown in the illustration). As we begin to activate the shoulder joint, by beginning to move the arm sideways, backwards, or forwards, fretting pressure transfers to the upper arm muscles. At this transition point we can also use a combination of both the upper arm muscles and the weight of the arm simultaneously, in addition to fine-tuning with the fingers. This interaction between the upper-arm muscles and the weight of the arm is particularly useful when changing left-hand position, whether along or across the strings (subsequent lessons explore this in more detail).

The Left-Hand Thumb

The left-hand thumb plays a critical role in the optimal functioning of the arm, hand, and fingers. One of the most counterintuitive aspects of left-hand technique is that the thumb should make a very light contact with the guitar neck. Anything more, especially in the necessary position the thumb occupies behind the first two fingers, introduces considerable tension into the palm of the hand. This, in turn, inhibits the coordination and independence of the fingers. Applying pressure with the thumb also reduces our ability to incorporate the upper arm-muscles and arm weight to assist in fretting notes and making changes of hand position. It also presents unnecessary difficulties in barring, position shifting, and other adjustments to the left-hand position. Avoid squeezing with the thumb!

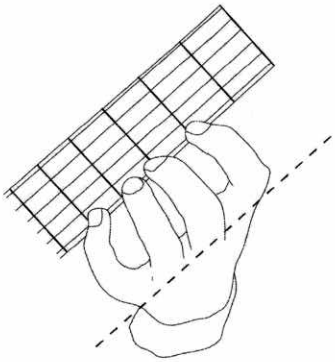
Since thumb physiology varies tremendously between individuals, it isn't possible to describe an exact positioning that works equally well for everyone. Following the principles described in this lesson, however, will allow the thumb to find the appropriate position in any particular playing situation.

Lesson 16—Refinement of the Basic Position

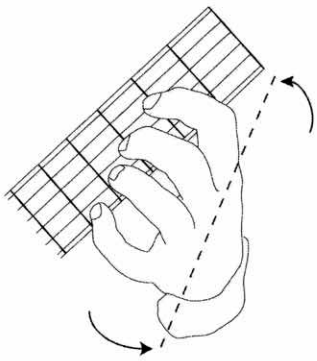
parallel, rotated and hyper-parallel positions · favoring the weaker (less independent) fingers · placing block-chord shapes · sequential finger placement in arpeggio textures

The hand position we've defined and explored so far is only one of many possible positions or modes of applying the left-hand fingers to the strings. Depending on the particular musical-technical context, any of a continuum of positions are employed in normal playing. These, however, are generally referred to with only two labels:

1) **parallel position**—the palm of the hand is parallel to the bottom edge of the fingerboard:



2) **rotated position**—the palm of the hand is closer to the bottom edge of the fingerboard at the base of the index finger and further from the edge of the fingerboard at the base of the fourth finger:



The terms 'closer' and 'further' are of course relative, and this leads us to view rotation as a continuum of positions (and there are situations in which we use what may be termed a *hyper-parallel* position, further extending the idea of a continuum—more on this later).

Parallel Position

If the fingers are appropriately curled and placed one per fret in, for example, the fifth position, a parallel (or near-parallel) hand position results. This position favors all four fingers equally and may be regarded as the basic hand position for playing scale passages and much melodic passagework in the majority of positions along the fingerboard (though see later).

A parallel position, however, can require a degree of lateral separation be introduced between the fingers for each to be optimally placed directly behind its fret, which can be undesirable, especially for those with smaller hands.

The placement of the thumb in a parallel position is in the vicinity of the first and second fingers of an 'air guitarist,' relatively at a point on an imaginary line running along the center of the back of the guitar neck (depending on the string(s) being played). The position of the thumb relatively higher or lower on the guitar neck depends upon:

1) the particular string(s) being fretted—a balanced left-hand position requires a slightly different thumb position for each string

2) maintaining an appropriate angle at the wrist—if the thumb is placed too low on the guitar neck the angle at the wrist will become excessively arched; if placed too high, the wrist will bend back on itself (hyperextend)

(Hyper-parallel position is discussed in a later section.)

Rotated Position

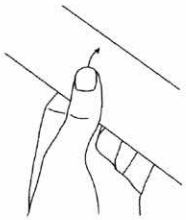
As already mentioned, an entire range of rotated hand positions is available, and we choose between them according to the particular finger configuration required. In general, a rotated hand position is used in the following situations (which is by far the majority of playing situations):

1) when two or more fingers play their strings at the same fret
2) in the majority of passages played in the open position
3) in scale (and other) passages to alleviate lateral finger-separation

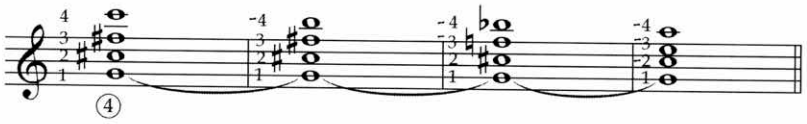
The presentation of the fingers to the strings is adjusted by a rotation of the forearm at the elbow (similar to turning a key in lock or using a screwdriver), often assisted by a small outward (away from the body) movement of the elbow from the shoulder.

The precise combination of forearm rotation and outward (or inward) arm movement depends on the particular finger disposition required. In some situations, the desired hand position can be accomplished by one or the other. In general, though, we should avoid significantly holding the arm outwards from the body (and therefore against gravity), or at least minimize the degree to which we do so.

The thumb must be responsive to the arm movements that create a rotated hand position—its contact point on the back of the guitar neck will follow an arc in response to movement through the various degrees of rotation:



- Explore the degrees of rotation and thumb positions required to play the following chords (start with a parallel position for the first chord):



- To determine if you've adopted an appropriate degree of rotation for each chord, relax the fingers on the strings. Do they remain in place or do any move along the string?

  If they move, leave the fingers lightly touching the string and adjust the degree of rotation until they're brought to the correct position.

  This is a good way to explore the hand position in general. Taking the first two chords in the exercise, for example, establish the first chord in a relaxed way and then bring the fingers into the position needed to form the second chord entirely by rotating the forearm (without an independent movement of the finger itself).

- To determine if the thumb has reacted correctly to the position change, relax it from the guitar neck and then put it back. If it returned to the same spot, it moved correctly.

  If not, it either: 1) retained tension during the shift due to having too heavy a contact with the guitar neck and lagged behind during the position change; or 2) made an unnecessary movement during the position change.

- The thumb, again, must be responsive to any change in hand position and, during almost any change in hand position, should reduce its already light contact with the guitar neck or, ideally, break its contact entirely, resuming its placement as the new position is reached (more on this later).

Here are the degrees of forearm rotation and outward movement of the arm required for each of the chords above:

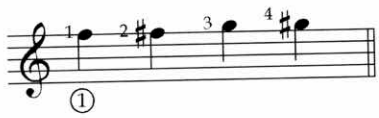
- the first chord, while perfectly playable in a parallel position, is most comfortably played with a slight degree of forearm rotation; no movement from the shoulder is necessary
- the second chord requires more forearm rotation but, again, no outward movement of the arm itself
- the third chord requires even more forearm rotation, along with a slight outward movement of the arm from the shoulder
- the fourth chord requires additional outward movement from the shoulder and an increase in the arch of the wrist (to accommodate an additional small forward movement of the arm)

Bear these subtle combinations of arm rotation and outward movement in mind when exploring passages in your repertoire.

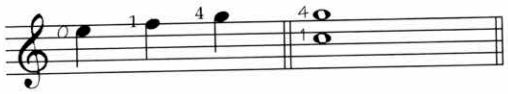
The Lower Position

A rotated hand position may be regarded as the default for playing in the lower position (a parallel position being used only when absolutely necessary). There are a number of reasons for this:

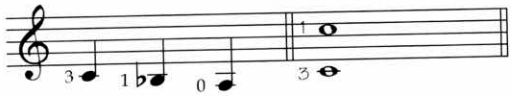
1 The wider fret spacing in the lower position requires a considerable degree of lateral finger separation to achieve a one finger per fret span over four frets. This is alleviated in a rotated position by the relatively straighter curvature of fingers **3** and **4**:



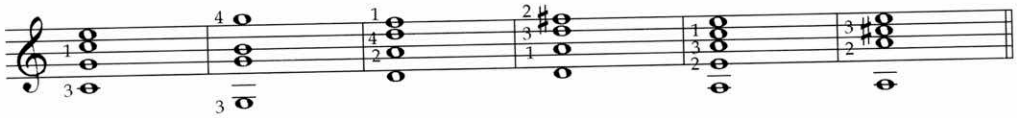
2 The common two-fret (whole-step) interval F-G (or C-D) is much easier with fingers **1** and **4** in a rotated position than with fingers **1** and **3** in a parallel position (again, due to lateral finger separation):



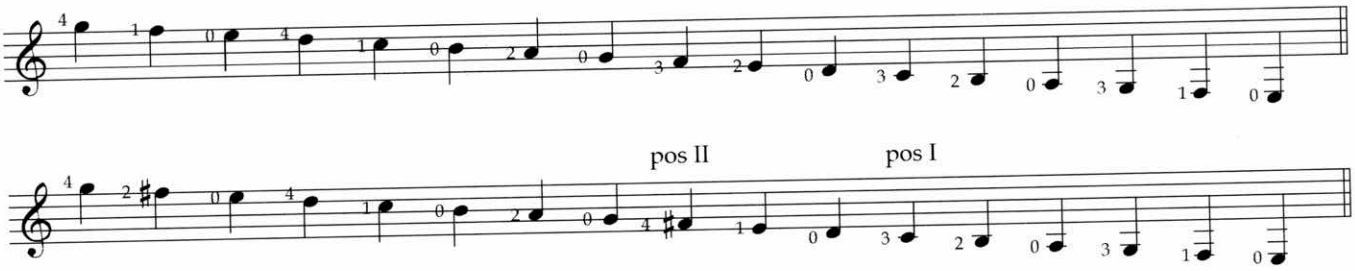
3 A rotated hand position also allows the third finger to play easily at fret three on the lower strings—the straightening of the middle joint required to play on the lower strings effectively increases its reach, removing the need for increased lateral separation of the fingers:



4 The majority of open-position chords and other finger dispositions in typical guitar keys also benefit from a rotated hand position:

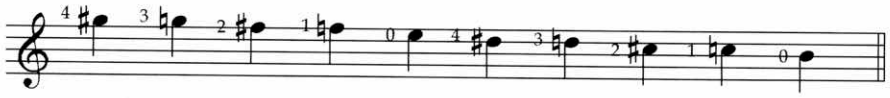


- A scale in the lower position may be comfortably fingered in a rotated position in the following way (the second example requires a temporary change to the second position):

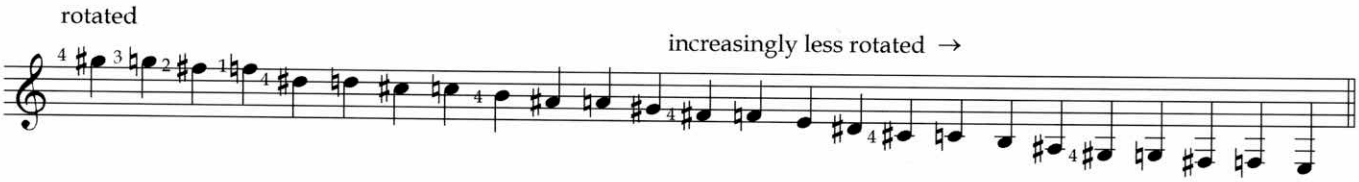


LH 16
Position

- As already mentioned, a four-fret span in the lower positions is enhanced by a small degree of rotation, increasing the effective reach of fingers **3** and **4** and reducing the degree of lateral finger separation required:



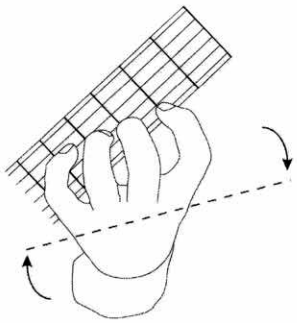
- Continuing onto the bass strings, however, requires an increasingly less rotated position if the fourth finger is to reach the strings (also see the next section):



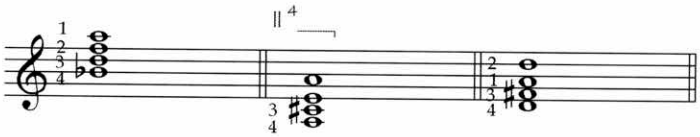
The goal (in any position) is for the fingers to remain just behind their frets when *relaxed*—stop at each string-change and check the position of your hand and thumb.

Hyper-Parallel
Hand Position

A *hyper-parallel* position passes beyond a parallel position with the forearm close to its limit of rotation and the elbow against the side of the torso:

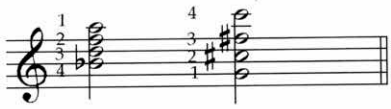


All three standard chord shapes below benefit from a degree of hyper-parallel positioning:



Since the forearm is very close to (or even at) its limit of rotation in a hyper-parallel position, it's important to make sure that the arm does as much of the work as possible (moving in toward the side of the body).

To explore this, switch back and forth between the following pair of chords using arm-movement only—the fingers retain their shape when lifting off the strings and are moved to the new position by the arm:



You should be able to observe the following:

- the arm moves relatively closer or further away from the side of the body
- the fingers essentially retain their shape and are moved to a prepared position above the strings by movement of the arm
- the thumb moves along with the hand as a result of each position change

In actual playing situations, the fingers do of course usually adjust their curvature to accommodate a new chord shape, though this should be aided by an arm movement whenever possible. Again, the test is that the fingers remain behind their frets when relaxed.

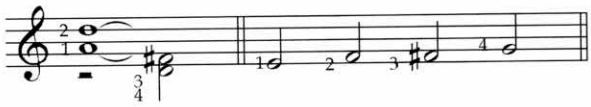
Favoring the Weaker Fingers

Regardless of whether we use a parallel position or a rotated one, a small degree of lateral extension may be required simply for all of the fingers to be optimally positioned just behind their frets. This brings us to a golden rule of left-hand positioning:

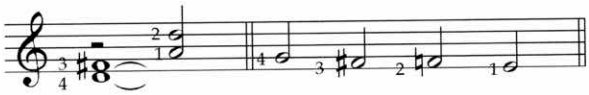
fine-tune the position to favor the weaker fingers

Here are a couple of examples:

- the first begins with a comfortable positioning of the strong finger(s) followed by the placement of the weaker ones:



- the second begins with a comfortable positioning of the weaker finger(s) followed by the stronger ones



Clearly, it's much easier for the stronger fingers to adjust to a hand position that favors the weaker ones than the other way around.

Placing Block-Chord Shapes

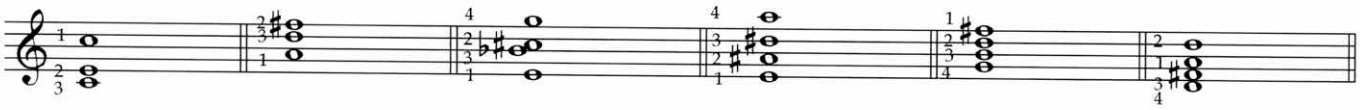
The fingers should be *placed* on their strings rather than grabbing at them. Whenever possible, fingers are prepared over (or close to) their strings before fretting and move to the strings with a natural controlled (moderate-speed) movement.

The process of practicing the optimal placement of a chord shape is as follows:

LH 16
Position

1) determine the required hand position (the degree of rotation and positioning of the weaker fingers), lightly touching the fingers to the their strings
2) gently raise the shape and touch it to the strings again; repeat a few times
3) completely relax the left hand, reform the shape over the strings, and place

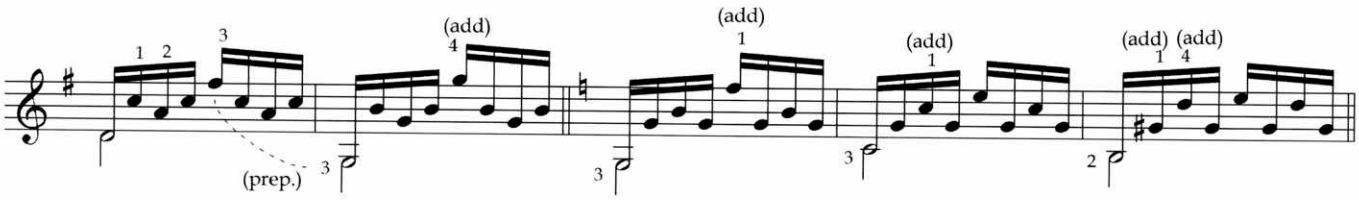
Use the following chord shapes (or any shape from pieces you may be working on) to experiment with finger placement:



(Techniques for switching between more challenging chord shapes are explored in Part 2.)

Changing Between Chords in Arpeggio Textures—Sequential Finger Placement

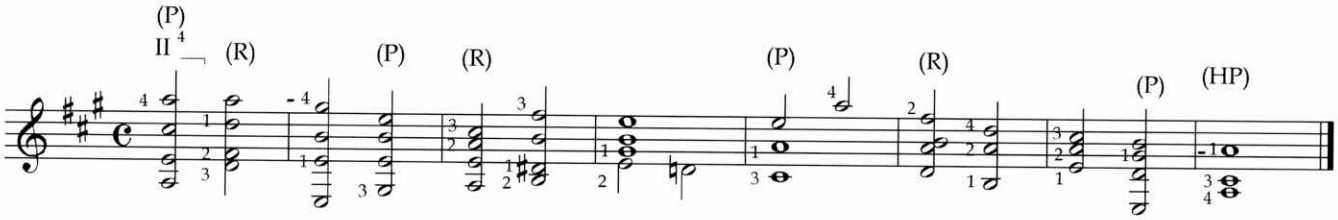
When changing between chords in arpeggio textures, the fingers should be placed as needed rather than as block chords, anticipating and preparing whenever possible:



(This technique is also explored further in Part 2.)

Practice Routine and Contextualization

Take a few short studies or passages from your current repertoire and explore your left-hand position. You may wish to mark changes of arm position in your practice scores (**P** for parallel, **R** for rotated, **HP** for hyper-parallel), as well as the preparation points (**prep**) and placement points (**add**) of individual fingers, as mentioned above:



NOTES

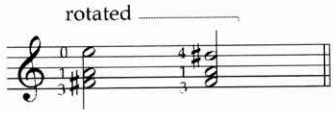
Parallel Position
In practice, a one finger per fret position is more comfortably accomplished by a 'near-parallel position' in which a slight rotation of the forearm is also present.

Rotated Position
The forearm is positioned somewhat away from the body when playing in the lower positions, though whenever possible with a relaxed shoulder that permits the weight of the arm to contribute to fretting (and, more often, to position changes).

While forearm rotation helps us incorporate left-arm weight into our playing, this can occur only in situations where the fingers are able to find an optimal position through forearm rotation alone—we can't access left-hand arm weight if the elbow is held away from its relaxed position, no matter how slightly.

Many players make unnecessary arm movements to achieve a left-hand position that could be accomplished more effectively through forearm rotation (and that would, in some cases, allow gravity to act upon a relaxed left-arm). Lower-position playing, on the other hand, almost always requires an away from the body arm movement, and therefore often isn't susceptible to the use of arm weight. (Arm weight is explored more fully in the lessons dealing with position changes.)

The Lower Position
Many chords can be played equally well in a parallel position. However, if such a chord is followed by one that requires a rotated position, it's preferable to play both in a rotated position (eliminating an unnecessary change of hand position):



Passages can be worked backwards to determine a hand position that works throughout. Still, so many chords require a rotated position that it makes sense to default to this position until a parallel position is required.

Despite the alleviation of lateral finger separation a rotated hand-position provides, many players default to a parallel (or near-parallel) position for scale playing in closed positions. While in a parallel position the forearm is close to its limit of rotation, personal physiology (flexibility of shared ligaments between the fingers, the relative lengths of fingers, etc.) can nevertheless make this position the best option (especially when descending slurs are involved). Individual players must therefore experiment to determine what works best for them in terms of ease and reliability.

Favoring the Weaker Fingers
Most of the abstract left-hand exercises in this book are explored in the fifth position (to alleviate the need for lateral separation of the fingers); nevertheless, each should use a near-parallel hand position that's been established for the weaker fingers, as described above.

Lesson 17—Barres

developing barre technique—isolating string-pairs · incorporating arm weight and the upper-arm muscles · fingering tips · further barre types · maintaining barres over extended time spans

Efficient barre technique relies on the independent control of the index-finger joints (rather than on simply squeezing between the thumb and finger). Since we seldom, if ever, use this kind of joint control in day to day activities, barre technique can take time to develop and is a technique that develops mainly from simply trying to do it. Still, there are a few things we can do to help it along.

Developing Barre Technique

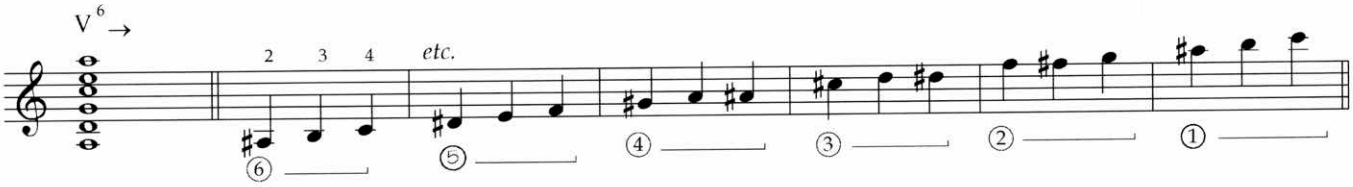
- Begin with two and three-string barres on the treble strings in the lower positions—lightly place a barre and gradually increase the pressure, plucking each string in turn until a clear sound is obtained (registering the accompanying sensation in the hand).

- Extending the barre to four, five, and six strings requires increased independent control of the index-finger joints—the tip joint will be straight (perhaps even hyper-extended) while the middle joint may be a little curved. This allows the index finger to apply varying degrees of pressure at various points along its length.

- Lightly place a full barre in position five and attempt to apply pressure to selectively sound only a single pair of adjacent strings at a time—while it often won't be possible to literally restrict the barre to sounding an isolated pair of strings only, the process of trying helps develop overall control in the barring finger.

  - Pointing the index finger fixes the middle and tip joints, allowing it to apply additional pressure to strings ③ and ④.
  - A slightly curved finger turned inward or outward a little, on the other hand, can also help direct the barring pressure where it's needed.
  - Avoid placing a finger joint directly on a string,
  - Also avoid using the second finger to assist the barring finger—as well as pulling the remaining fingers out of position, this simply delays the inevitable (that the index finger will need to accomplish barres under its own steam).
  - Relax the index finger and thumb often when practicing barres—it's very easy to tire or strain the hand.

- Check that the tension required for the barring finger isn't inadvertently transferred into the other fingers—place a full barre and then touch each of the remaining fingers to each string over a four-fret span (this can also help break the habit of using the second finger to assist the barring finger):

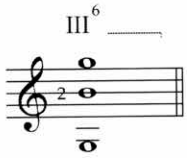


Arm Weight and the Upper-Arm Muscles

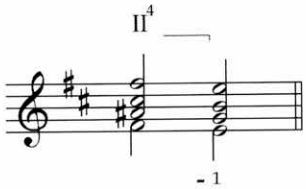
The contribution of arm weight and the upper-arm muscles to barre technique can be experienced by temporarily removing the thumb from the guitar neck as you hold a barre. As the thumb returns, a balance can be found in which the upper-arm muscles, the weight of the arm, and a small amount of pressure from the thumb can combine to produce the barre (provided the index finger retains an appropriate degree of firmness).

Fingering Tips

- Many chords that involve a barre do not require that all of the strings be held by it. For example, for the following chord only strings ① and ⑥ need to be held and sounded by the barre:

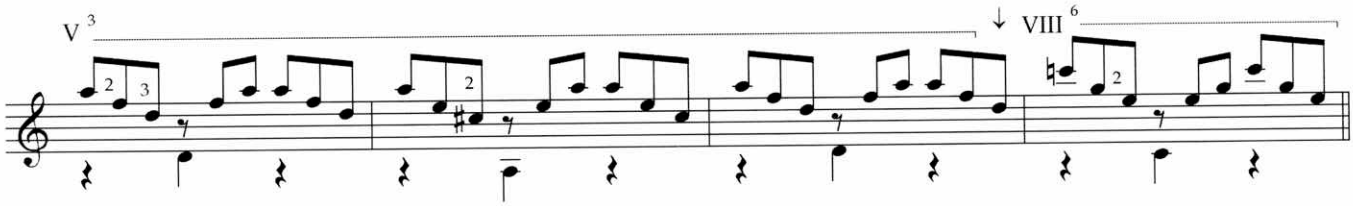


- On the other hand, context can often dictate that the number of strings covered by the barre be greater than is needed to simply produce the notes at that point—it's often necessary to hold additional notes to facilitate a legato movement to the next position:



- In other cases it can simply be more comfortable to hold more strings than need to sound (a question of individual preference).

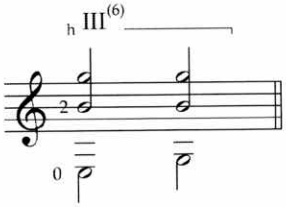
- In situations where the number of strings covered needs to be adjusted between consecutive chords (especially in arpeggio textures), it's helpful to prepare the new disposition slightly ahead of time. For example:



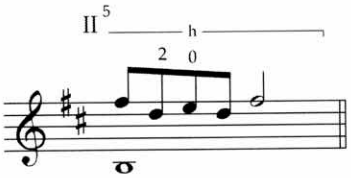
Further Barre Types

A number of additional barre types can be useful:

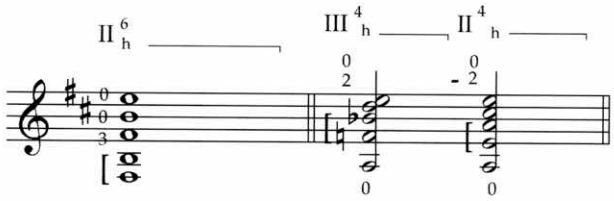
- *hinge barre*—the index finger plays string ① in barre position but leaves the lower strings open in anticipation of a further upcoming barre or other note on the lower string:



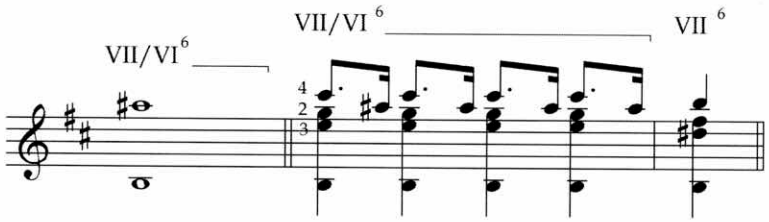
- a similar technique is used when an open string needs to sound during the course of a regular barre:



- a *hyper-extended barre* allows one or more of the upper strings to remain open while barring several lower ones:

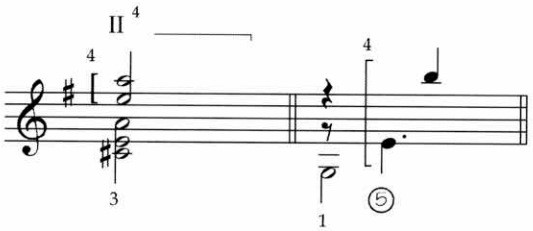


- a *transversal / cross-barre* allows more than one position to be barred simultaneously:

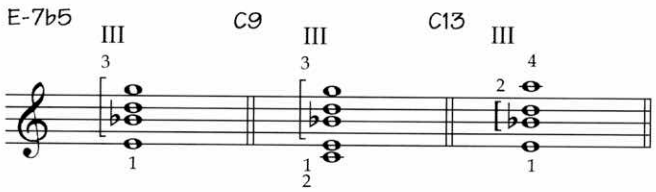


- barres with the other fingers

  —with finger **4** (common in the Russian seven-string guitar repertoire and sometimes useful in other repertoire):



  —with finger **3** or finger **2** (often used for jazz-chords):



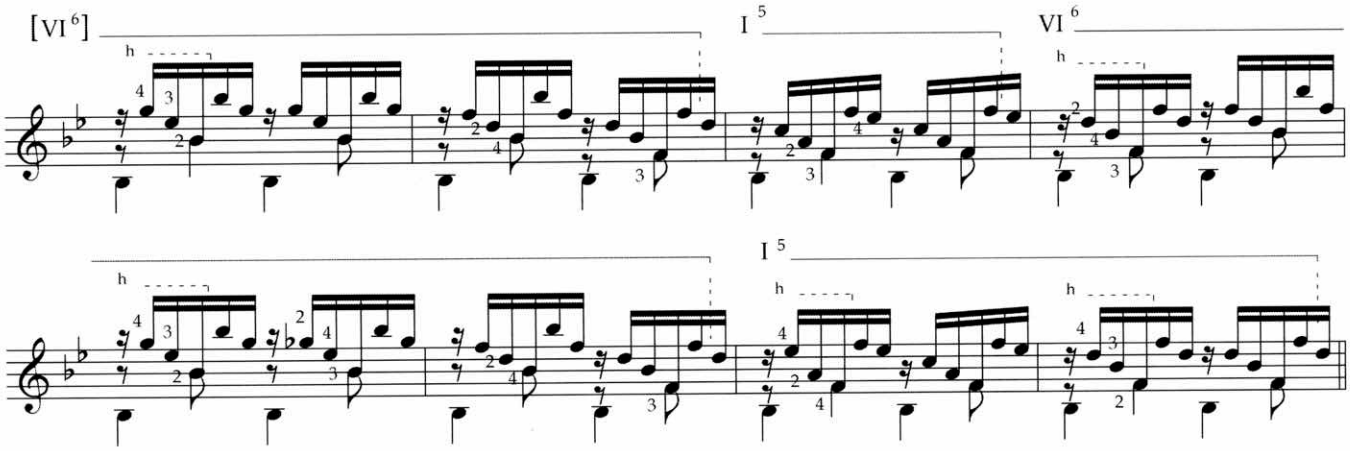
Maintaining Barres Over Extended Time Spans

Maintaining barres over extended passages of music can be very challenging (since the hand easily tires). In addition to the techniques already mentioned (barring only necessary strings, avoiding over-squeezing with the thumb, and involving arm weight and the upper-arm muscles), extended spans of barring demand that we find every opportunity to relax the hand. This can occur:

- as a brief relaxation during a chord change or a position change

- as a brief reduction of the barre to a hinge-barre during a change between two barre chords

Here's an example taken from one of the most challenging barre etudes in the repertoire (Sor, *Op. 29 No. 13*):



Practice Routine and Contextualization

As mentioned at the beginning of this lesson, barre technique is developed over time. Explore two and three-string barres before moving on to four, five, and six-string barres and the more unusual barres described above. Avoid over-squeezing with the thumb and instead experiment with the positioning of the barring finger and the contribution of arm weight and the upper-arm muscles. In passages of extended barring, seek out opportunities to momentarily release the barre and relax the hand.

Explore passages from your current repertoire with the goal of optimizing your barring technique along the lines described in this lesson.

> Always take the time to determine the number of strings and the duration of each barre in your pieces.

NOTES

Imprecise notation of barres is common in the standard published guitar repertoire. A simple, precise method of notating a barre, on the other hand, consists of using a Roman numeral position marker, a superscript number to indicate the number of strings to be covered, and a bracket indicating the duration:

Again, take the time to determine and indicate the number of strings and the duration of each barre in your pieces.

Further Barre Types
While often avoided by classical guitarists, fourth finger and other non-index-finger barres are often expedient. Several examples are provided in the Left-Hand Fingering Guidelines at the end of Part 2.

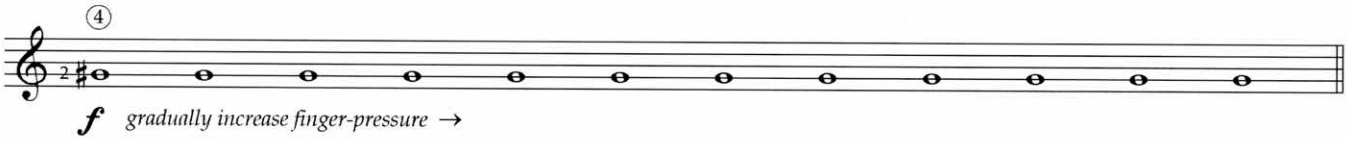
Lesson 18—Precision, Tension, Coordination & Independence

precision—minimum tension and contact points · tension levels associated with various finger states · coordination—compound gestures and legato (see Notes) · finger independence—'fly-away' fingers

The four qualities, Precision, Tension-Level, Coordination, and Independence form the basis for virtually all technical considerations concerning the left hand. We'll make a preliminary exploration of each in this lesson.

Precision

- Use the following Minimum-Tension Exercise (at fret 6 on string ④) to explore the relationship between precise finger-placement and fretting pressure:



1) place the fingertip just behind the fret but with the finger only lightly resting on the string (make sure that the thumb is quite relaxed)
2) plucking loudly, gradually increase the finger pressure until the initial muffled sound gives way to a buzzing sound
3) increase the finger pressure a little further until a clear note results
4) register the amount of pressure being used
5) maintaining this pressure, move the finger along the string, away from the fret—a muffled or buzzing sound returns
6) increase the finger pressure further and notice how much harder you must now press to produce a clear note when playing further away from the fret

- Precise finger placement also allows us to cultivate precise contact points on the fingertips.

  Place the left-hand fingers along string ④ and press the strings. Examining the resulting grooves that appear in the fingertips, you should find that they appear somewhere in the region of the center of the fingertip (though forming differing angles on each finger).

- Whenever possible, left-hand fingers are prepared over their strings (and quite close to them) ahead of time and are then placed with a natural, unforced movement. Left-hand preparation and anticipation are the keys to accurate playing (and are explored further in Part 2).

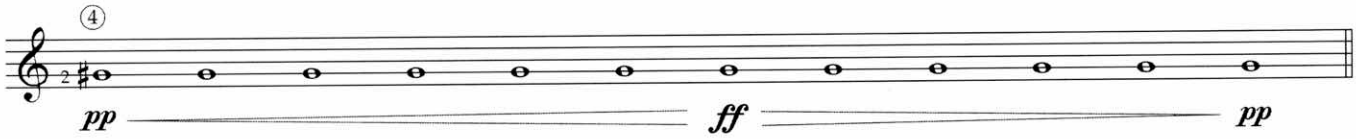
> Be in the habit of keeping all of the fingers close to the string, even when playing only a single note. Non-playing fingers can compromise the positioning of the playing fingers adjacent to them.

- Repeat the Minimum-Tension Exercise, but begin with an excessive amount of finger pressure and gradually decrease this until you reach a muffled, ghosted note. In this way, you experience decreasing tension in addition to earlier experience of increasing tension.

  Explore the two forms of this exercise with each finger in turn, varying the strings and positions along them. You'll quickly become sensitive to the degree of tension needed to efficiently fret the strings (which, in a practical sense, should be a little greater than the absolute minimum required to cleanly fret the note). Spending some time practicing eyes closed will enhance your sensitivity to these sensations.

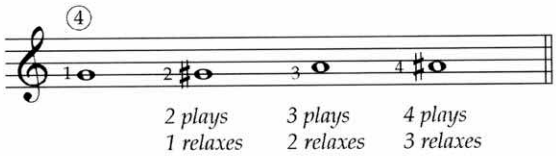
- Using a variety of dynamic levels, play a sequence of slow repeated-notes and explore the following:

  1) the response of the fretting finger to the plucking action of the right hand
  2) the subtle reduction in finger pressure that allows you to hold and sustain the note after it has been sounded



(Again, keep all fingers close to the string.)

- Use the following exercise to explore the exchange of tension from finger to finger as each presses or relaxes (leaving each relaxed finger in contact with the string):



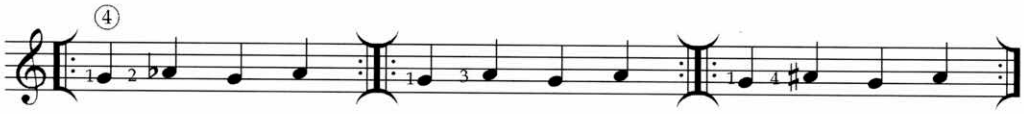
> We can be sensitive to four levels of finger tension:
>
> 1. **passive**—the finger is not about to fret a note and has no particular tension level
> 2. **prepared to play**—the finger has just enough tension to be in an optimal position and state of readiness to be placed on the string
> 3. **fretting impulse**—the finger applies enough pressure to resist the plucking action of the right hand and prevent the string from buzzing against the fret
> 4. **sustaining pressure**—a subtle reduction in pressure that nevertheless allows the string to continue sounding (when a note is long enough)

Also explore the exercises provided in this lesson with the thumb removed from the guitar neck.

> **Relaxation Points** Even when left-hand tension levels have become optimized, it's still necessary for us to find relaxation points in our practice and performance (at the ends of phrases, for example). While this often takes place sub-consciously, there are almost always further spots we can take advantage of.

Coordination

- Use the following melodic fragments to explore the coordination between the left-hand finger movements and the right-hand plucking action, aiming for perfect legato:

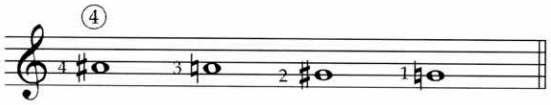


Listen carefully to the way in which the end of each note gives way to the beginning of the next—no detectable silence, nor extraneous noise, should be present. Try this exercise eyes closed.

Finger Independence

Like the right-hand, finger-pairs **23** and **34** are influenced by the movements of one another.

- Place the four fingers on the string and lift each one in turn (there's no need to actually pluck the string):



How did the fourth finger react when the third finger was lifted? A small reaction is normal and is simply a result of the inter-connectedness of the two fingers.

If, however, the fourth finger reacted significantly, this indicates a lack of control and is something that needs to be worked on. One way to address this is to simply trick the finger into thinking it will re-fret its note as the third finger releases from the string, both fingers returning almost immediately to a more relaxed state. Practicing slowly in this way helps gain control over fly-away fingers.

(We'll explore a range of finger-independence exercises in the next two lessons and in Part 2.)

Practice Routine and Contextualization

Take short passages from your current repertoire and carefully explore them for the following:

1. **hand-arm position**—degree of rotation
2. **thumb**—lightness and position
3. **fingers**—position relative to frets and strings; tension level (passive, prepared, fretting impulse, or sustaining)

Make frequent checks of your hand position by pausing, relaxing the fingers and thumb, and observing whether they remain naturally in position or if they're using additional tension due to a less than optimal hand position.

> Also periodically check the tension levels of the shoulders and upper-arm muscles—you will often discover situations in which more relaxed sensations can be introduced.

NOTES

Precision Precise finger-placement not only allows us to play accurately, it also allows us to minimize the pressure needed to cleanly fret the note. The caveat is that the finger must be placed directly behind the fret (whenever this is possible).

The fingers need only hold the string against the fret; the fingertips do not need to make contact with the surface of the fingerboard. This, of course, depends on the size of fret wire used on the particular instrument, which can vary quite a lot. Large-diameter fret wire is much more accommodating for the left hand than the thinner fret wire that many guitar makers seem to prefer: the fingertips do not reach the fingerboard itself and they can clearly feel the frets, which allows for finer control of tension levels. This setup not only promotes, but demands a light touch; otherwise the strings will likely be pressed out of tune.

(Instrument Setup) Two further factors relating to left-hand tension levels concern the instrument itself: the height of the strings above the frets (the 'action') and the tension of strings used. In general, a lower action requires higher tension strings, and vice versa. A balance should be struck, however, between the ability of the left-hand to fret its notes without excessive pressure and the ability of the right hand to produce a full dynamic range without the strings rattling against the frets. A good compromise is to use an action and string tension that permits the loudest playing at a plucking point between the right-edge of the soundhole and the bridge. Still, string tension is of course subject to personal preference and the general response of a particular instrument. Many concert players, however, do use normal-tension strings along with a relatively low action (a precise setup of the instrument is essential for this combination of action and strings to work well).

Tension Levels While minimization of finger tension is essential for coordinated finger movement, it's also important to be familiar with (and to control) the wider range of tension present in normal playing.

The pressure needed to hold and sustain a note, especially on the lower strings, is often less than that needed to resist the initial plucking-action of the right-hand (to avoid a buzz when the note is plucked strongly).

Fingers release tension when not holding a note, either by releasing from the string or by remaining on the string in a relaxed way.

Practicing with the thumb away from the guitar neck increases our awareness of the role of the thumb and its tension levels and allows us to experience arm weight of the and the contribution of the larger muscles of the upper arm.

Coordination Smooth legato is a hallmark of fine playing and requires perfectly coordinated movement both between the fingers and between the two hands.

Coordinated, simultaneous movement also has an additional technical benefit: it simplifies technique by combining otherwise separate movements into gestures that we perceive as single actions. Playing a descending two-note figure along a single string, for example, will usually require that we simultaneously lift one finger while placing the next, precisely coordinated with the plucking impulse of a right-hand finger (and probably the simultaneous preparation of another right-hand finger as well). Obviously, this is far too much to think about while actually playing. Nevertheless, it's something we can develop through carefully aware technical study. We'll look at this issue in more detail in later lessons.

Finger Independence Additional exercises for control over the less independent fourth finger are explored in Part 2.

Lesson 19—Touch (Sensitivity) and Independence Exercises

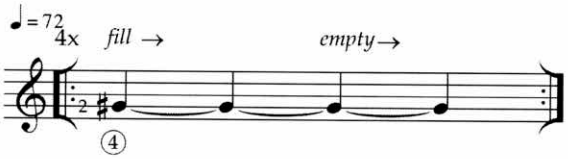
finger sensitivity and control of tension · exchanging individual fingers and finger pairs · melodic and chordal exercise forms

The exercises in this lesson are for the left hand alone (the right hand doesn't pluck) and consist of pressing the strings with individual fingers while other fingers remain in a relaxed light contact with their string(s). The fretting finger relaxes and is returned to its pre-play position by the tension of the string, rather than by its own movement. Be sure to explore these exercises eyes closed as part of your practice.

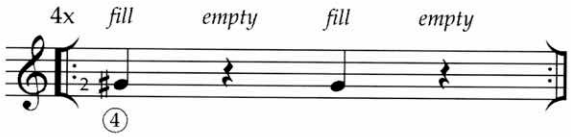
Melodic

- Place the four fingers on string ④ in the fifth position, one-per-fret, and practice applying pressure with each finger individually while keeping the other fingers relaxed on the string. Do this in the following ways for each finger (**Ex. 1**):

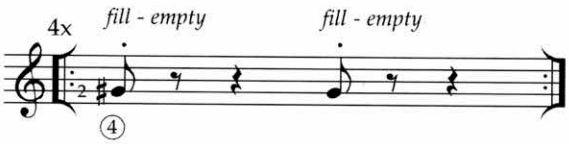
  1) add pressure to the finger slowly, taking two counts to reach a minimal fretting tension and, similarly, taking two counts to gradually empty the finger (allowing the string to return the finger to its pre-play position on the string):



  2) add and release pressure more quickly, with an even on-off alternation:



  3) add and release immediately, as if playing a staccato:



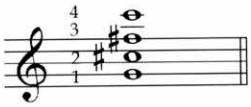
  Bear in mind the following:

  - all fingers remain in contact with the string and maintain their playing aspect throughout
  - non-playing tension (and pre-play tension for the fretting finger) is enough to remain on the string but without moving it

- the thumb doesn't react to the activity of the fingers and throughout maintains a very light contact with the guitar neck
- practice slowly enough that you can control the inactive fingers as well as the active one (some fingers may even begin to shake as you become accustomed to the sensations involved!)
- make several passes, exploring each of these factors, as well as each finger individually (whether active or passive)

Chordal

We can develop the exercise above for finger pairs and for alternation between finger pairs by assigning each finger to its own string, using the following chord-shape:



- Use the three modes of filling and emptying the finger(s) described in the previous section and explore the following (**Ex. 2**):

1) each individual finger: **1—2—3—4**
2) each finger pair: **12—13—14—23—24—34**
3) alternation between finger pairs: **12-34—13-24—14-23**

Again, practice slowly enough that you can experience and control the sensations in the inactive fingers as well as the active ones and be sure to maintain a light contact with the thumb (which shouldn't react significantly to the activity of the fingers).

Calluses
The amount of callus (hard skin on the fingertips) that results from playing is a further issue to be aware of. While we do need a degree of this, too much hard skin at the fingertips reduces the sensitivity and touch of the fingers. Hard calluses are also prone to producing finger-squeaks on the wound strings. Use a pumice stone, or something similar, to regulate them.

Practice Routine

Incorporate these exercises into your technical practice routine over a three-day cycle as follows:

day 1	**Ex. 1—Ex. 2** for individual fingers
day 2	**Ex. 1—Ex. 2** for each finger pair
day 3	**Ex. 1—Ex. 2** for alternating finger pairs

It will probably take several weeks before these exercises begin to feel comfortable and they should continue to be practiced as you work on further lessons. A Practice Grid is provided in Appendix 3 to help you keep track of things.

Lesson 20—Melodic Coordination Exercises

preliminary exercises—economical movement, lightness of touch, coordination (legato) · the common finger combinations—exercises and practice methods

This lesson explores left-hand finger coordination using finger combinations that occur continuously in the repertoire. Our goals are as follows:

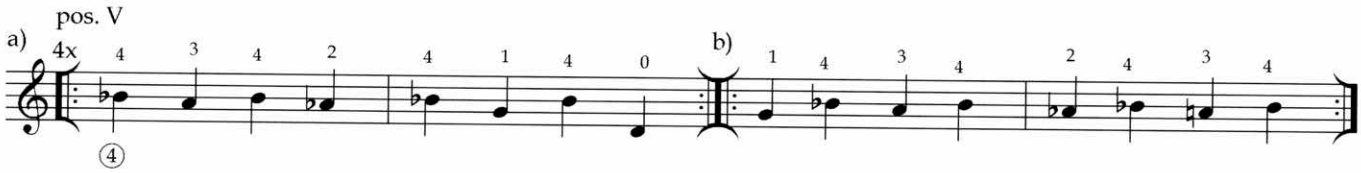
1. economical finger movement (keeping fingers close to the strings)
2. an overall light touch (fine control of tension in the fingers and thumb)
3. finely-coordinated movement of fingers involved in the transition from one note to the next (legato)

1 Preliminary Exercises

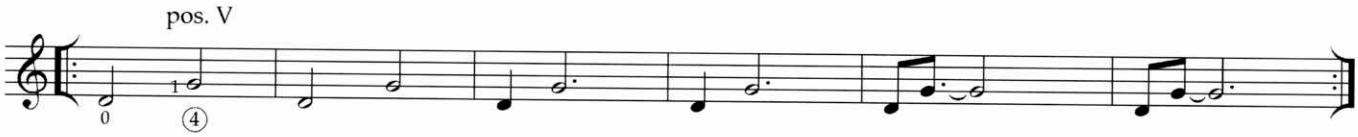
- Left-hand only (no plucking) on string ④, position five—focus on maintaining the curvature and close to the string positioning of the four fingers (especially finger **4**), as follows (**Ex. 1**):

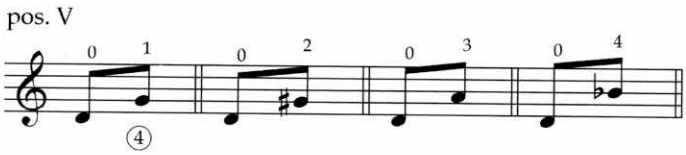
  1. establish the hand position for the weaker fingers
  2. slowly place and lift all four fingers simultaneously, as a block
  3. slowly place the four fingers individually in ascending order, **1234**, leaving each finger down on the string as the next finger plays. Again, focus on controlling finger **4** as the other fingers move onto the string; check the thumb frequently for a light contact
  4. begin with all four fingers on the string and slowly lift them off in descending order, **4321**, again keeping finger **4** close to the string as the other fingers lift from it

- The following patterns emphasize control of the fourth finger. Release each finger from the string as the next finger plays (**Ex. 2**):



- Explore the placement of each individual finger; keep non-playing fingers curled in playing position and practice at a range of speeds, as follows (**Ex. 3**):

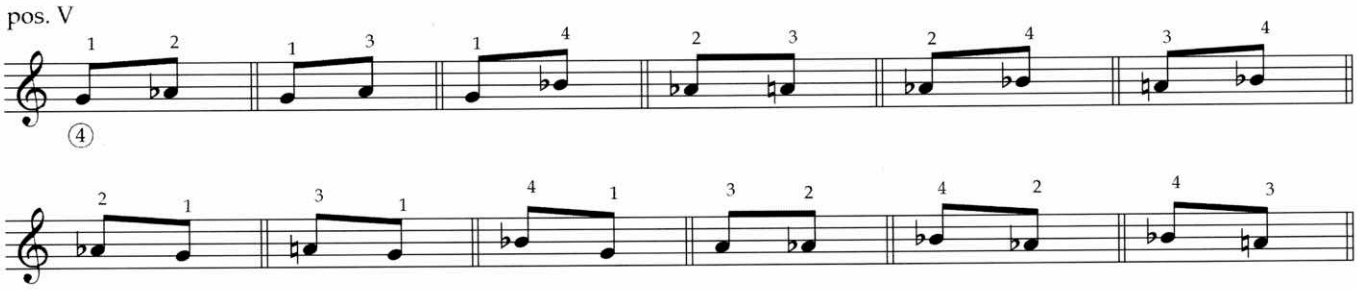




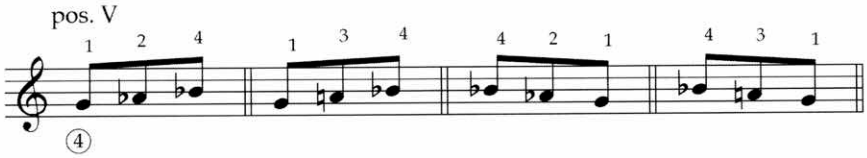
2 The Common Finger Combinations

The following finger combinations (grouped sequentially by type) occur all the time in normal playing and form the material from which all other finger combinations are derived. Develop control over each group before moving onto the next (the practice methods to be used are described in the next section).

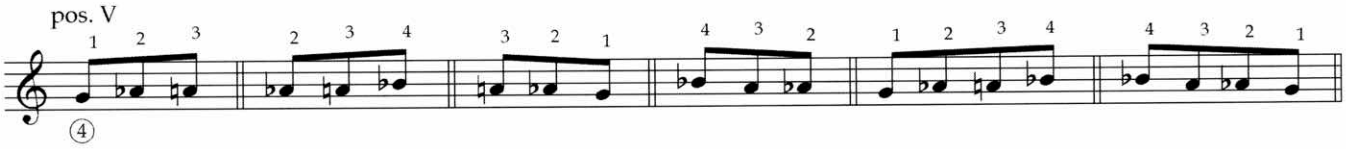
Group 1—Two-Finger Combinations



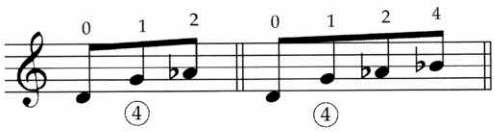
Group 2—Three-Finger Combinations:



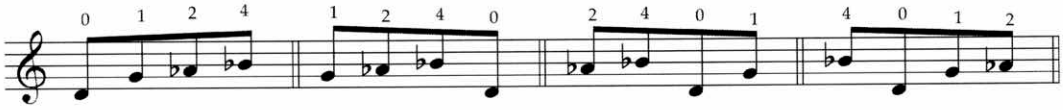
Group 3—Chromatic Combinations:



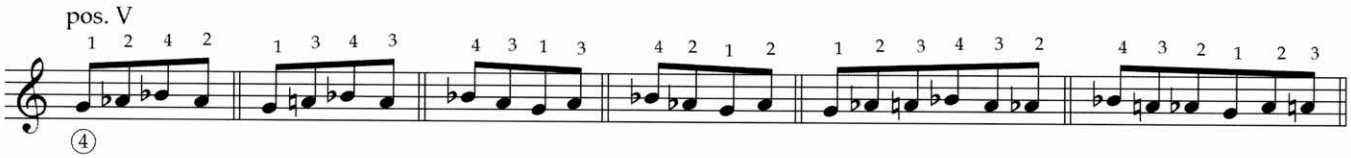
The combinations in these first three groups can be extended by adding an open string at the beginning (resulting in an additional action for the first finger of the group), for example:



And they can be rotated (for example, **0124** becomes **1240**, **2401** and **4012**) (see practice method 4 later in this lesson):



Group 4—Compound patterns (returning figures):



3 Practice Methods

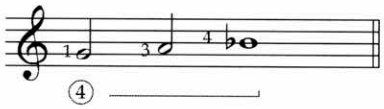
To accomplish the goals set out at the beginning of this lesson, we need to practice each of the common finger combinations in several ways (some of which are counterintuitive). Bear the following in mind as you work on the various exercises:

- practice in the fifth position to promote a relaxed hand position
- establish the hand position by working back from the fourth finger
- initially, practice on string ④ to experience a reasonable amount of string tension; later, experiment with other strings and positions from day to day
- aim for perfect legato through carefully coordinated, simultaneous action of both hands and all fingers involved
- keep non-playing fingers close to the string—fly-away fingers, even when not playing themselves, can compromise the positioning of the fingers adjacent to them
- at the end of each cycle, release the thumb and assess the overall tension level of the hand and arm

The exercises in this main section should also be practiced eyes closed.

1) Left Hand Only —Leaving Fingers Down as well as Switching-Out

When ascending, fingers can be left on the string as each new finger plays; or, each finger can lift off the string as the next finger plays:

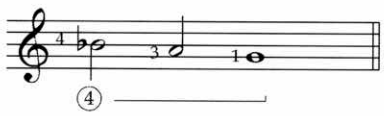


While the normal way of playing (especially in faster passages) is to exchange fingers (fingers release from the string as the next finger plays), leaving the fingers down as a practice method helps refine the hand position.

- Each ascending pattern should therefore be practiced as follows:

  1. **leaving fingers down**—relax the finger so that it retains only enough tension to stay in contact with the string
  2. **exchanging all fingers except the first**—to promote a stable hand position.
  3. **exchanging all fingers**—each finger relaxes from the string as the next finger plays (the normal way of playing)

When descending, the fingers may be placed and lifted individually; or, they may be placed together as a group and then lifted one by one:

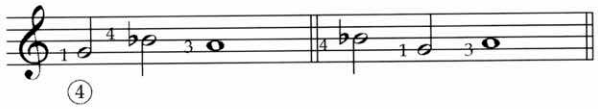


Again, as a practice method, placing the fingers together helps refine the hand position.

- Practice descending scale fragments as follows:

  1. place the fingers involved together, lifting each individually as the fragment progresses
  2. place the fingers individually except the lowest note of the group (which remains down throughout)
  3. place and lift all fingers individually (the normal way of playing faster passages)

- When playing compound fragments such as the following:



  1. place as many fingers as possible (to begin with as well as during a figure), then lift or place fingers individually as the fragment progresses
  2. place and lift all fingers individually

2) Left Hand Only—With and Without the Left-Hand Thumb

- One of the main goals of left-hand technical development is to refine the touch and sensitivity of the thumb. Practice as follows:

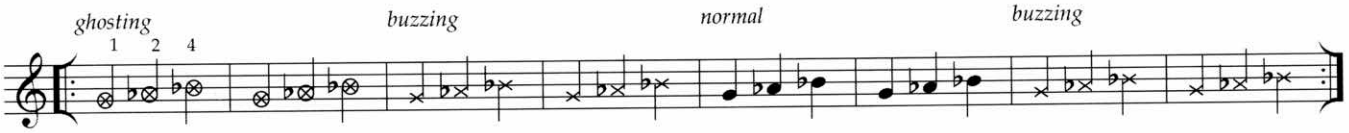
  1. with the thumb in light contact with the back of the guitar neck—the normal way of playing
  2. with the thumb released from the guitar neck
  3. with the thumb in a normal light contact with the guitar neck with a release coordinated with the last note of the fragment

> The remaining exercises in this lesson are practiced in the normal way of playing —each finger releases as the next finger plays and the right hand plucks.

3) Ghosting, Buzzing, and Normal

To help develop a light touch that's free of excess tension, play each combination with a range of fretting pressure, as follows:

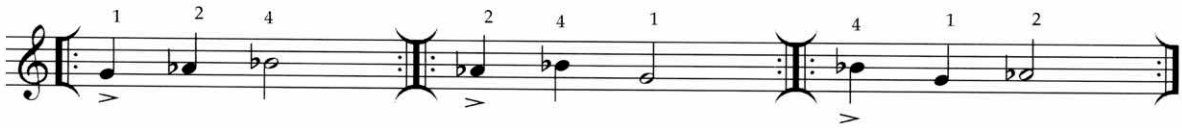
1. **ghosting**—using only enough pressure to place the finger on the string without pushing the string onto the fret; a muted note results
2. **buzzing**—using a little more pressure, but only enough to allow the string to buzz against the fret (this is quite difficult to do consistently)
3. **normal**—using just enough pressure to produce clear notes



Alternate back and forth between these three tension levels and learn to distinguish between them (these levels also vary from string to string).

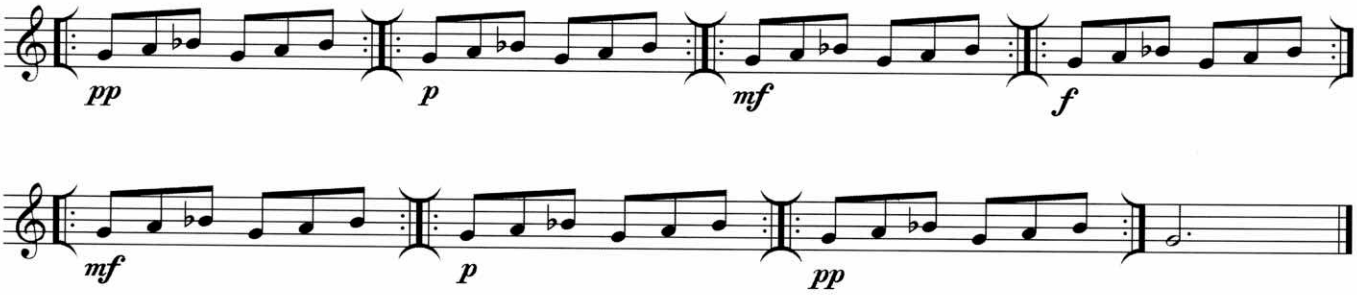
4) Rotating the Pattern with Accentuation

Rotate the pattern and place an accent on the first note of each permutation (the left-hand finger shouldn't overreact to the right-hand accent by pressing significantly harder):



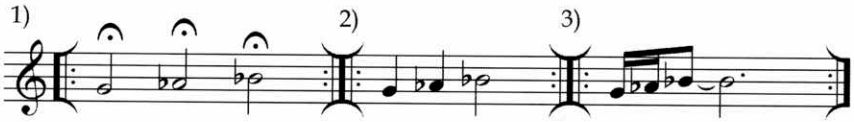
5) Cycling with Crescendo and Diminuendo

Cycle the pattern crescendo-decrescendo (to further experience and control tension levels):



6) With a Broad Range of Tempos

Super-Slow—Moderate—Fast:



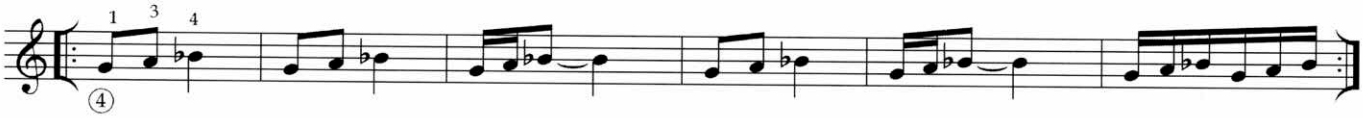
1. **Super Slow**—move the fingers as slowly as you possibly can, making smooth, continuous movements rather than jerky ones. This is quite challenging and you may even find that some of your fingers shake or make involuntary movements as you gradually gain control over them.

2. **At a Moderate Tempo**—practice with relaxed movements at a natural-speed of finger movement and at an overall moderate tempo.

3. **At a Fast Tempo**—at your highest controllable tempo (also see the following two practice methods)

7) Slow-Fast Alternation

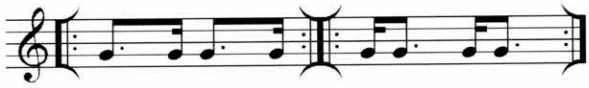
Alternate between slow and fast versions of each finger combination:



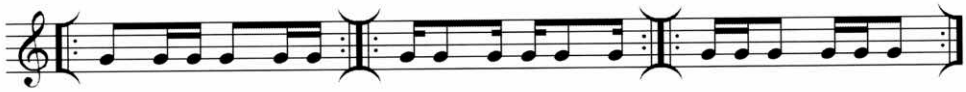
- Use the following rhythms to explore the coordination between the various internal groupings of finger pairs within a pattern:

8) Rhythmic Variations

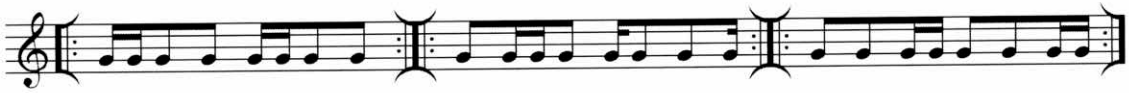
For 2-note finger combinations:



For 3-note and 6-note combinations:

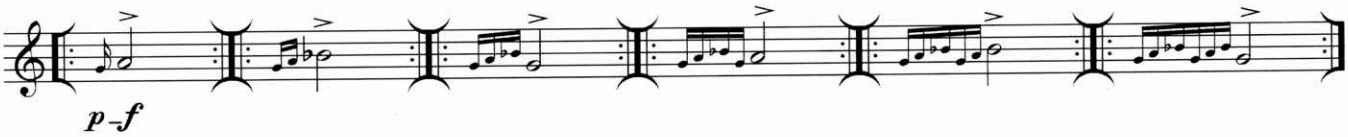


For 4-note combinations:



- Gradually build-up a sequence of repetitions by adding one new element at a time (alternating between Slow-Fast and Soft-Loud versions of each measure):

9) Sequential Addition at Speed



Practice Routine and Contextualization

After familiarizing yourself with the various techniques and exercises presented in this lesson, warm-up with the Preliminary Exercises (**Exs. 1-3**) and then practice two finger combinations each day using the full range of practice methods. It takes approximately 3 minutes to work on one combination using all of the practice methods; the whole thing should take around 8 minutes.

Master groups 1 & 2 in sequence before moving onto Groups 3 & 4 (which can be practiced together). Once a group is comfortable maintain it with a simple play-through as you continue to work on the remaining groups.

Use the following routines:

Group 1

day 1	day 2	day 3	day 4	day 5	day 6
12—34	**13—24**	**14—23**	**012—034**	**013—024**	**014—023**

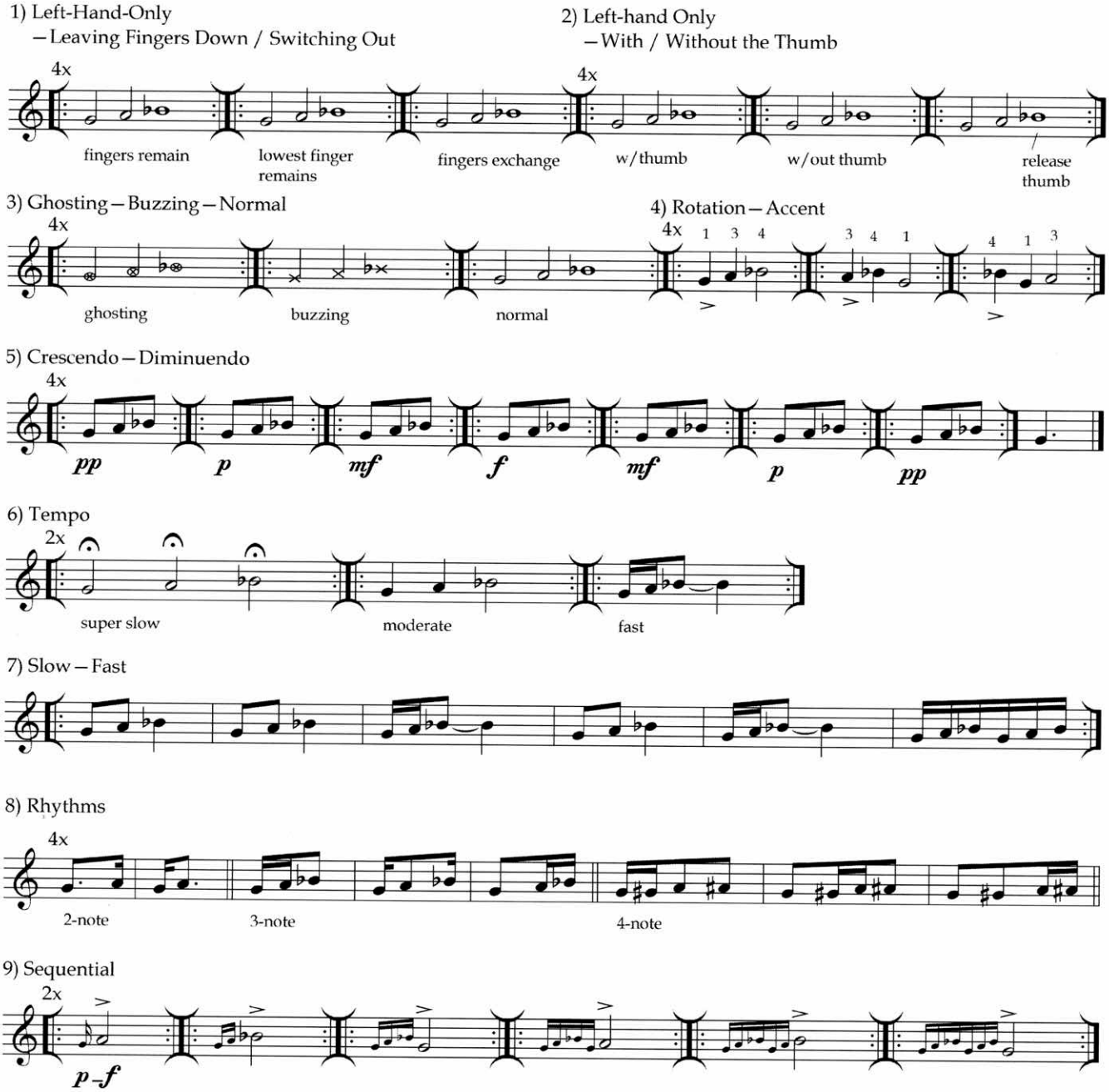
Group 2

day 1	day 2	day 3	day 4
124—324	**134—432**	**0214—0324**	**0134—0432**

Groups 3 & 4

day 1	day 2	day 3	day4	day 5	day 6
123—432	**234—321**	**1234—4321**	**1242—4313**	**1342—4212**	**123432—432123**

The complete exercise sequence is provided below (written out for **134** as an example):



A Practice Grid is provided in Appendix 3.

Once these exercises are comfortable, maintain the technique with fixed-position scales (see Lessons 23 & 25 for example) and with such pieces as Carcassi *Op. 60 No. 1.*

NOTES

Practice Methods
Practicing left-hand only and eyes closed allows us to give full attention to the sensations present in the left hand.

1) Left-Hand Only—Leaving Fingers Down as well as Switching-Out
In normal playing, we exchange fingers in passagework to reduce overall tension (which improves independence and coordination) and to allow free fingers to anticipate and prepare for upcoming events.

For ascending finger combinations:

- **leaving fingers down** as the fragment progresses helps refine the hand position
- **exchanging all fingers except the first** promotes finger independence as well as a stable hand position
- **exchanging all fingers** develops coordination and independence, allows each finger to relax between its individual movements, and allows fingers to prepare for their next event (the normal way of playing, at least for faster passages)

2) Left Hand Only—With and Without the Left-Hand Thumb
Practicing with the thumb released from the guitar neck allows us to explore the contribution of arm weight and the upper arm-muscles; practicing with a release coordinated with the last note of the fragment allows us to explore thumb tension and provides a foundation for efficient left-hand shifting technique (explored in the next main section).

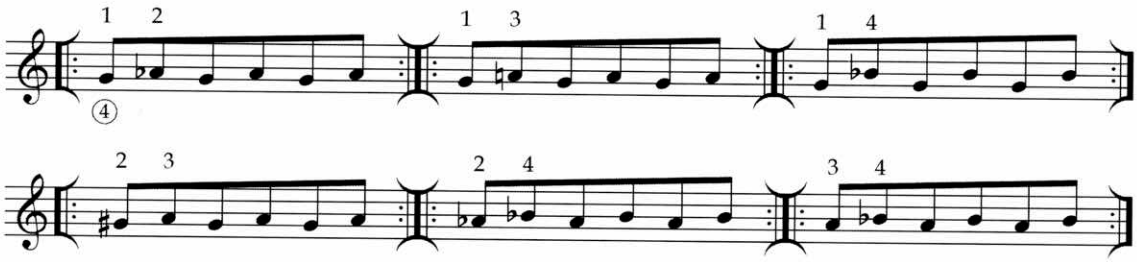
Lesson 21—Independence Between the Hands

combining disparate finger groupings between the two hands

In this lesson we'll apply several systematic right-hand alternation schemes to a selection of the single-string left-hand formulas explored in the previous lesson. The goal of the lesson is for control at a moderate tempo.

- Begin be applying the following right-hand finger pairs to each of the left-hand finger pairs:

im	**mi**	**ma**	**am**



Accent the first note of each left-hand pair and say the right-hand finger name aloud.

- Next, combine three right hand-fingers against two left-hand fingers, as follows:

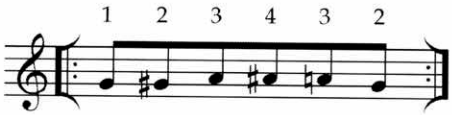
ami	**ima**	**pim**	**pmi**

Again, say the right-hand fingers names aloud as you slowly play through each combination, now over three passes:

1. on each note
2. on the first note of each right-hand pattern
3. on the first note of each left-hand group

Practice at a very slow tempo and become completely comfortable before speeding -up the exercise.

- Also practice the following pattern, applying each of the three-finger right-hand patterns to two sets of three left-hand fingers:



Practice Routine

Play through these exercises each day until they become comfortable (a few weeks), then periodically revisit them as part of your warm-up routine.

NOTES

In addition to left-hand ghosting (explored in the previous lesson), in which the two hands exercise independent dynamic actions, independence between the hands (which also implies coordination between the hands) requires the ability to apply relentless right-hand alternation patterns to the constantly varying left-hand fingering that occurs as a matter of course in scales and other passagework.

These exercises also provide the foundation for velocity fingerings, which are explored in Part 2.

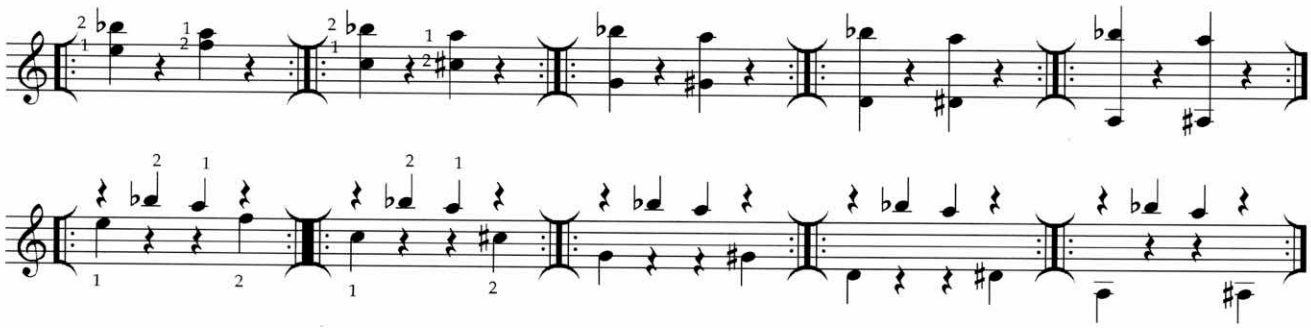
Additional exercises along these lines are also provided in Part 2

Lesson 22—Intervallic Coordination Exercises

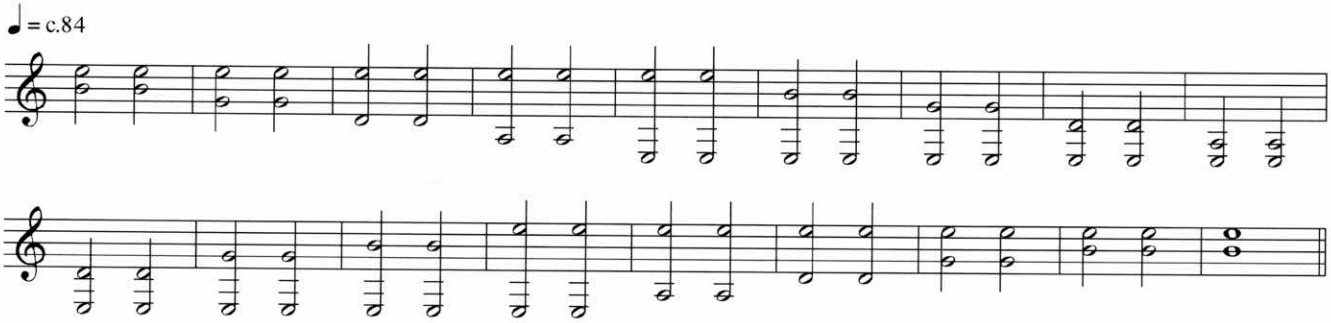
coordination and independence of finger pairs

In this lesson we'll explore finger coordination and independence of finger pairs in chordal and contrapuntal settings.

Here are the two forms of the exercise (using the finger pair **12** as an example)—the first chordal, the second contrapuntal

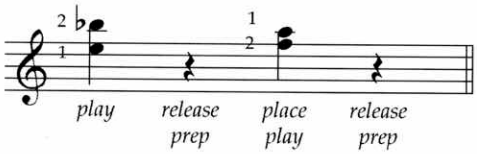


- Practice both the chordal and the contrapuntal forms at a slow tempo using the following string sequence and playing each measure at least twice (establish the position for the weaker fingers):



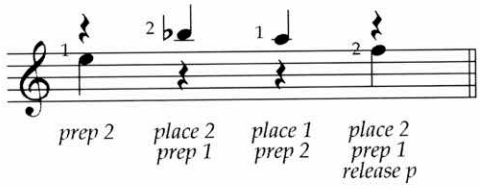
Here's a little more detail regarding the movement sequences involved in each form of the exercise:

The Chordal Form



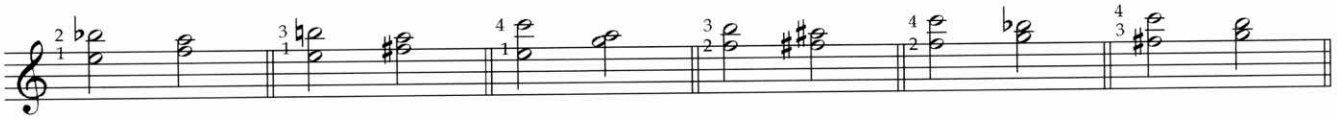
beat 1—play the first chord
beat 2—release the fingers and thumb and reposition over the new string set
beat 3—place the fingers and thumb, simultaneously plucking with the right hand
beat 4—as beat 2

The Contrapuntal Form



beat 1—prepare **2** over its string
beat 2—place **2**, release **1** and prepare it over the new string
beat 3—place **1**, release **2** and prepare it over the new string
beat 4—as beat 2, plus release the thumb to move to each new string set

- Practice exchanging each finger-pair:



Practice Routine

Once comfortable with the exercises, work on two finger-pairs each day in both chordal and contrapuntal forms over a three-day cycle, as follows:

day 1	day 2	day 3
12—34	**13—24**	**14—23**

Be sure to:

- play across increasingly-wider string sets
- prepare fingers over the strings then place (avoid grabbing)
- practice left-hand only to fully experience the left-hand sensations

It takes around 2′30″ to practice one finger pair in both forms playing each measure twice. A Practice Grid is provided in Appendix 3.

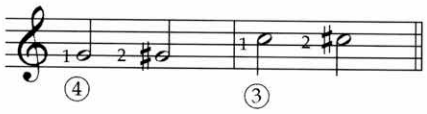
Be sure to establish the hand position to favor the weaker fingers.

Lesson 23—Shifting Across the Strings

shifting across the strings · role of the thumb · role of the arm

Position shifting, both between and along the strings, is a constant feature of every piece we play. Despite this, relaxed and reliable legato shifting is a quite sophisticated and somewhat counter-intuitive technique. In this lesson we'll explore a number of issues relating to shifting between the strings.

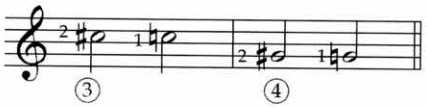
- Explore the following simple shift from string ④ to string ③ with fingers **1** and **2**:



1) as **2** plays, lift **1** and release the thumb
2) making a small downward movement of the forearm, pivoting on **2**, to bring **1** over string ③ without changing its ready-to-play curvature
3) simultaneously lift **2**, fret **1**, and return the thumb to the guitar neck—**2** will now be positioned over string ③ ready to play its next note

> In actual playing situations the release of the thumb results in a movement away from the guitar neck that is slight indeed; it may even retain a very light contact with the guitar neck.

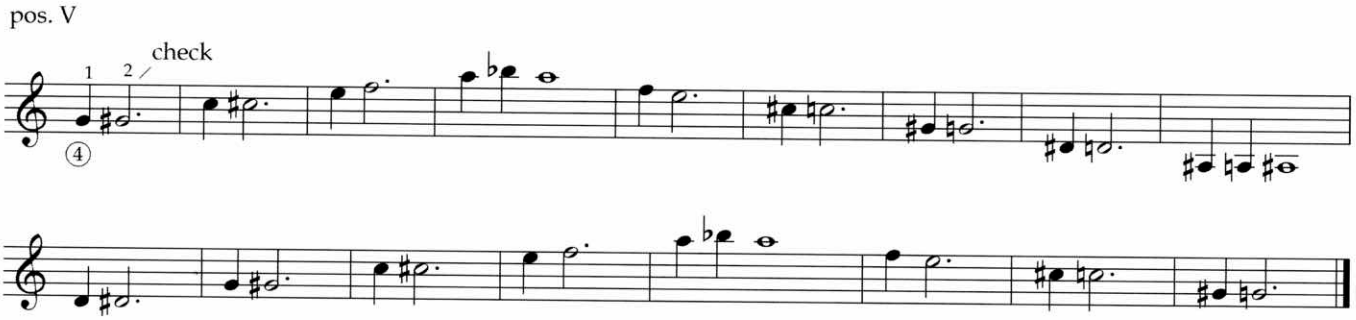
- Using the same process, explore moving back from string ③ to string ④—release the thumb as **1** plays and use a small arm movement to prepare **2** over string ④:



- Explore each finger pair, ascending and descending between strings ③ and ④ (reversing the finger order for the descending shift):

13	**14**	**23**	**24**	**34**

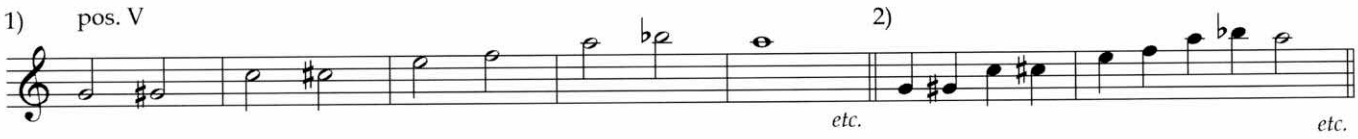
- Extend these exercises to shifting across all six strings using the following string sequence (written-out for fingers **12**) (**Ex. 1**):



Again, the thumb releases on the final note of each string as the lead finger is prepared over the new string by a small movement of the arm, pivoting on the fretting finger. Take advantage of the long notes to assess the attitude of the lead finger and the thumb.

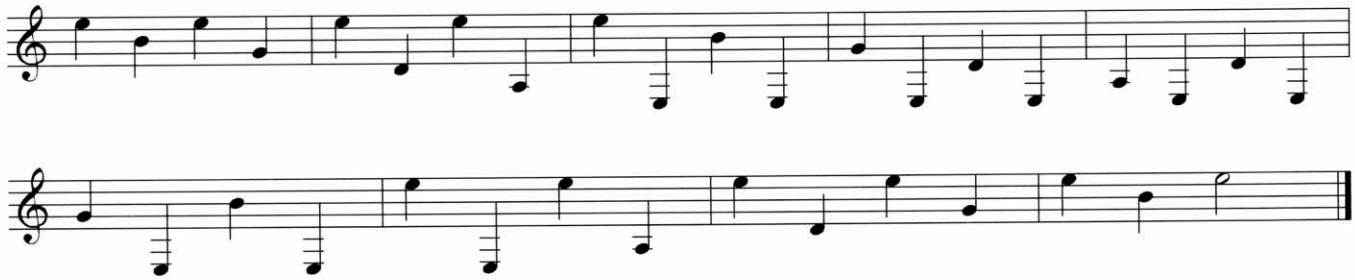
- When comfortable, play in equal note values as follows (**Ex. 2**):

  1. slowly, using half-notes
  2. at double the speed using quarter-notes (a speed at which the movements of the thumb and arm feel more or less continuous rather than as a series of on-off actions)



Alternating back and forth between slow and fast versions of the exercise helps internalize an accurate version of the technique as the unique sensations of each version inform one another.

- Increasingly larger shifts require preparatory movement of the lead finger as well, resulting in an increase or decrease in the curvature of this finger (depending on the direction of the shift). The lead finger returns to its default curvature once the next finger is brought over to the string. Use the following string crossing-sequence to explore this (**Ex. 3**):



- Practice the following groups:

finger pairs (ascending and descending):

12—21	**13—31**	**14—41**
23—32	**24—42**	**34—43**

three-finger diatonic combinations:

124	**421**	**134**	**431**

chromatic combinations:

123	**321**	**234**	**432**	**1234**	**4321**

Bear the following in mind:

- the fingers exchange (as one finger plays, the previous one lifts)
- the thumb releases on the last note of each string and the lead finger is prepared over the new string by a small movement of the arm while the fretting finger pivots

Practice as follows:

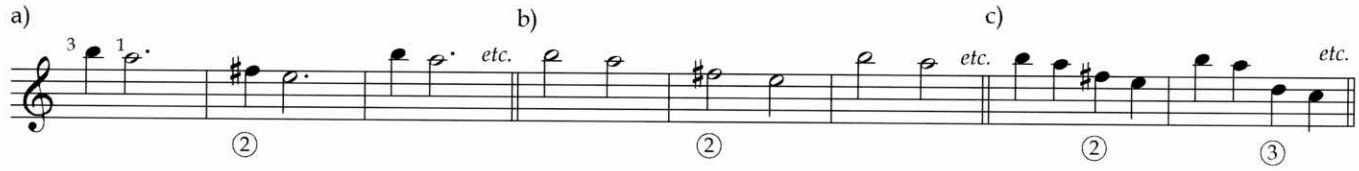
1. pausing on the last note of each string to check the attitude of the thumb and lead finger
2. playing without a pause in both slow (half-note) and faster (quarter-note) versions

Practice Routine and Contextualization

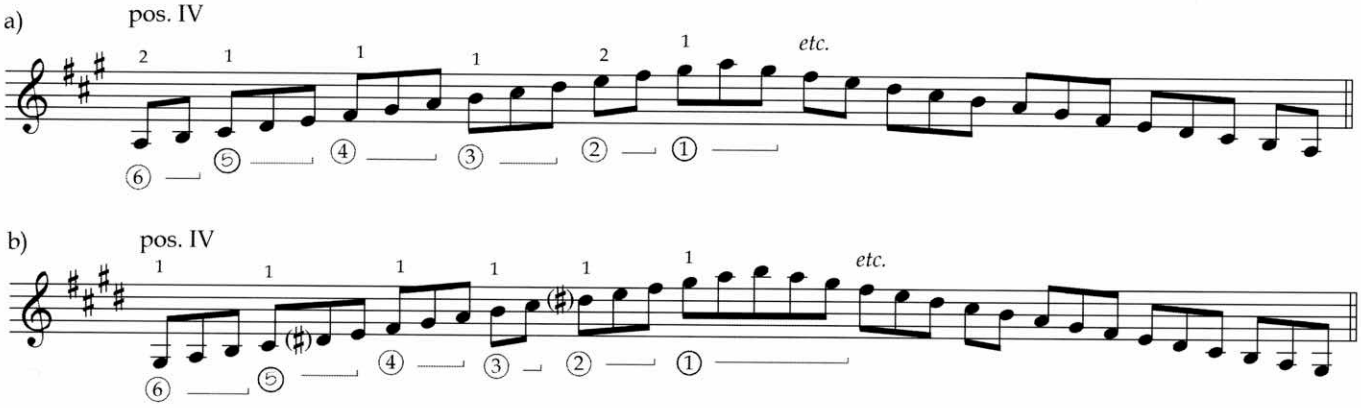
Once the basic ideas are comfortable, practice **Ex. 1** and **Ex. 2** using all pairs of fingers each day for a week or two (or until comfortable). Then practice **Ex. 3** over the following six-day cycle:

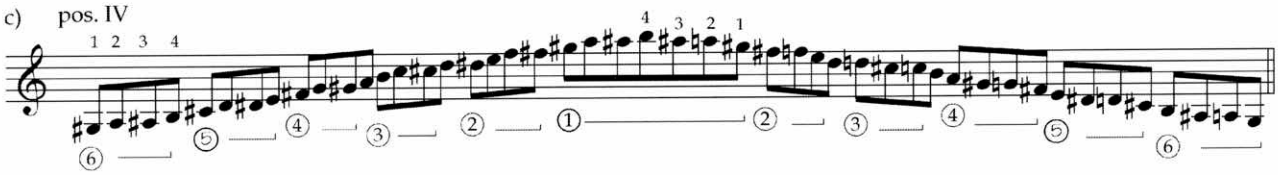
day 1	day 2	day 3	day 4	day 5	day 6
12—21	**13—31**	**14—41**	**124—421**	**123—321**	**1234**
34—43	**24—42**	**23—32**	**134—431**	**234—432**	**4321**

Again, be sure to practice with a pause on the last note of each string before alternating between slow (half-note) and faster (quarter-note) versions of the exercise, as follows:



Fixed-position scales such as the following can be used to maintain the technique:





NOTES

While it may seem reasonable to allow the thumb to pivot during shifts across the strings, acting as an anchor, this results in differing curvatures of the fingers from string to string, accommodating an increasingly large departure from their ideal relationship with the thumb as they move across the strings. As always, the thumb must maintain an optimum relationship with the fingers and retain this during any string change, releasing from the guitar neck to assist this.

Lesson 24—Shifting Along the Strings

counterintuitive aspects of position-shifting · role of the thumb · gauging distances

Counterintuitive Aspects

Reliable, legato position-shifting is an elusive aspect of left-hand technique, due no doubt to the counterintuitive nature of several aspects involved. The following *intuitive* actions are in fact problematic:

1. the shift begins ahead of time—*it shouldn't*
2. the shift is made as quickly as possible—*it doesn't need to be*
3. the thumb maintains its contact with the guitar neck—*it shouldn't*
4. the fingers extend or contract during the shift—*they (usually) don't need to*

A Guiding Principle of Optimal Shifting Along the Strings—the fingers themselves behave just as they would had no shift occurred (whenever possible)

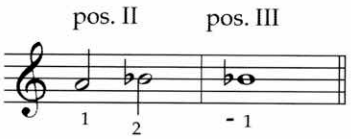
Role of the Thumb

Shifting along a string works in a similar way to shifting across the strings—the thumb releases on the note before the shift and the arm carries the hand and fingers to their new position.

Again, the release of the thumb results in a movement away from the guitar neck that is very slight; it may even retain the lightest of contacts with the guitar neck. The important thing is that any contact the thumb may make should be so light that no friction can occur during the shift—the thumb maintains its optimal relationship with the fingers throughout the movement.

Ascending Shifts

- Explore the following simple one-fret ascending shift:



First practice without the shift, as follows:

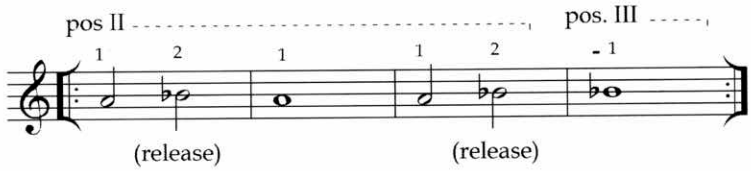
1. as **2** plays, **1** and the thumb release
2. as the right hand plucks the following note: **2** lifts, **1** frets and the thumb resumes contact with the guitar neck

Then with the shift:

- as **2** plays, **1** and the thumb release
- the following actions then occur *simultaneously* as the right-hand plucks the string:

  1 the arm moves the hand to the new position (without rushing)
  2 **2** lifts as it reaches fret 4, **1** frets the string at fret 3
  3 the thumb resumes contact with the guitar neck

- Once this on-off action of the thumb and fingers feels comfortable, alternate back and forth between the version without the shift and the version that includes the shift (that includes the arm movement):

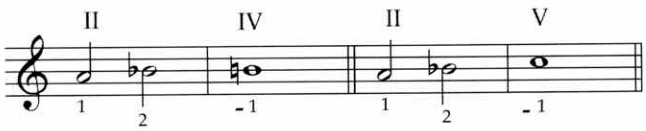


Again:

- the movements of the thumb and fingers, and their associated sensations, are identical in both version of the exercise
- the arm moves the hand to the new position with a natural, unrushed movement
- the various movement of both hands occur simultaneously
- no discernible break in sound occurs

- Next, instead of lifting the first finger, simply release its tension, leaving it in light contact with the string (this is the normal way of shifting, at least along the treble strings).

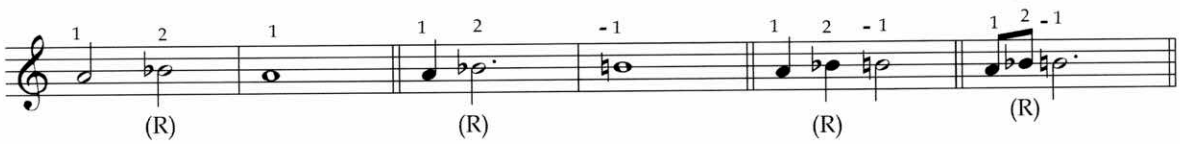
- Explore successively larger shifts (**Ex. 3**):



Practice as follows:

1. with the shift itself omitted
2. pausing before the shift (to check the attitude of the fingers and thumb)
3. with quarter-notes
4. with eighth-notes

For example (R = Release):



- Practice the following finger pairs in the same way:

13	**14**	**23**	**24**	**34**

For now, as you increase the distance of these shifts, go only as far as one fret beyond the last finger of the finger pair. For example, for finger-pair **14**, shifting from position II, go as far as position VI.

Avoid rushed movements as the distance of the shift increases—a rapid movement is difficult to bring to a stop without tension and without the likelihood of a compromised placement of the thumb and fingers. Move at a natural, controlled speed using the plucking action of the right hand to direct events, listening carefully to the length of the last note before the shift.

- Ascending shifts should also be practiced with the common diatonic and chromatic finger-groups:

124	**134**	**123**	**234**	**1234**

Gauging Distances

- Two further aids to shifting along a string:

  Gauging Distances in Terms of the Hand—for example, *'finger 1 replaces finger 2'* or *'finger 1 goes one fret higher than finger 4'*

  Looking at the Target—look at the target fret ahead of and during the shift, the lead finger will move to exactly that place (further aspects of this are explored in Part 2 under Longer Shifts)

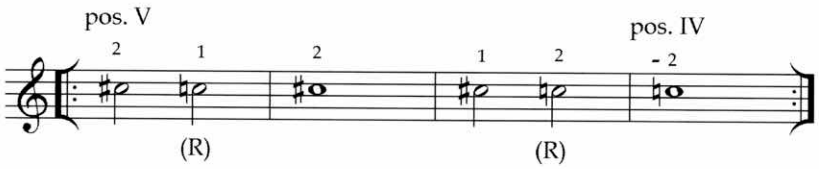
Descending Shifts

Descending shifts along a string work in the same way as ascending ones:

- the thumb releases on the last note before the shift
- the lead finger behaves as though it will simply play again at the same fret
- the shift is made by a controlled, natural-speed movement of the arm
- the right-hand plucking action serves as a trigger and the ensuing simultaneous actions of the arm, fingers, and thumb are coordinated with it

Descending shifts are often aided by leaving the lowest finger of the pair in light contact with the string throughout.

- Explore a simple descending shift with the finger-pair **21**, alternating back and forth between a version that omits the shift itself (that omits the arm movement) and the full shift (R = Release):



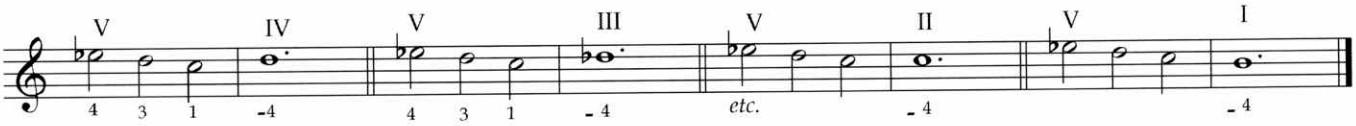
- Practice all of the finger pairs and the common diatonic and chromatic groups:

21	**31**	**41**	**32**	**42**	**43**

421	**431**	**321**	**432**	**4321**

- Again, for each finger combination increase the distance of the shift one fret at a time, descending as far as one fret below than the lowest finger of the group.

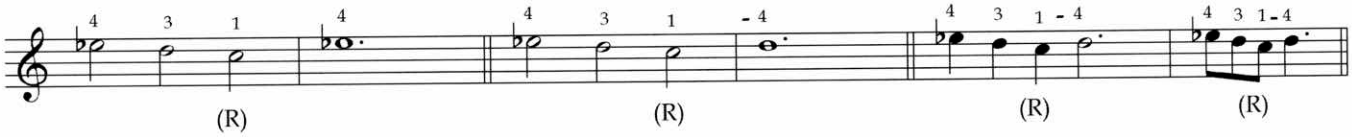
- Here's the exercise written out for fingers **431** (leave the first finger in light contact with the string during the shift) (**Ex. 4**):



Again, each combination should be practiced as follows:

1. with the shift itself omitted
2. with a pause before the shift (to check the attitude of the fingers and thumb)
3. with quarter-notes
4. with eighth-notes

For example (R=Release):



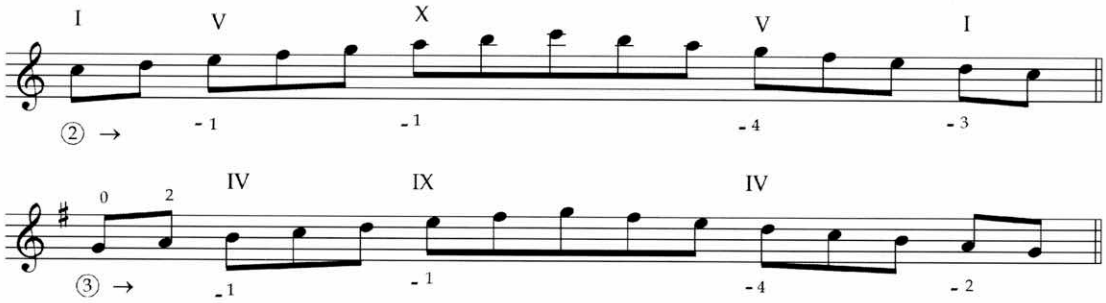
Practice Routine and Contextualization

When comfortable with the techniques and examples presented, practice both ascending (Ex. 3) and descending (Ex. 4) shifts each day, as follows:

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
12—21	13—31	14—41	124—421	123—321	1234
34—43	24—42	23—32	134—431	234—432	4321

Again, be sure to practice with a pause on the last note of each position before alternating between slow (quarter-note) and fast (eighth-note) versions of the exercise.

Single-string scales such as the following can be used to maintain the technique once comfortable:



NOTES

Two common problems arise from the need to reach the new position on time. The first results from making the left-hand movement early, no matter how slight. The position shift, the placement of the finger and the right-hand plucking action should occur simultaneously, as a single gesture—although counterintuitive, there's ample time for all of this to occur without a perceivable break in legato. In fact, the speed of the shift itself—our second timing problem—doesn't even need to be particularly fast. A natural, controllable movement is all that's needed to make a shift without a perceivable break in legato. Inexperienced players, however, often make unnecessarily fast movements, which are difficult to control and to bring to an end—and which are therefore tense and prone to inaccuracy (both in terms of the actual target and of the precise positioning of the fingers and thumb once the new position is reached). An inappropriately fast movement can also lead to an inadvertent accent as the right hand reacts to the left hand's increase in tension.

It also seems reasonable to leave the thumb in contact with the guitar neck during a shift, so that it may act as reference point for the fingers. Optimal positioning of the thumb relative to the fingers is critical to efficient left-hand technique; leaving the thumb in contact with the guitar neck during a shift, however, will very likely alter that positioning as friction causes it to lag behind, especially in a descending shift along a string.

While it may seem natural to extend or contract a finger in anticipation of a shift, this is often counterproductive—the finger will need to readjust to a normal fretting attitude once it arrives at its new position. The most efficient and reliable action of a finger (especially during a single-string shift) is to retain its normal attitude as though it will simply fret the string in the original position—in effect, this is what occurs from the perspective of the finger, except that the arm carries it to the new position (exceptions to this are discussed in Part 2).

Most shifts involve a sideways rotation of the upper arm at the shoulder and usually only subtle movements of the elbow (the role of the arm is explored in more detail in Part 2).

Ascending Shifts
The essential consideration is that the contact of the shifting finger (the guide-finger) is so light that no friction occurs during the shift and, therefore, no change occurs in the attitude of the finger—it arrives at the new position in a perfect playing position. For very long shifts, it can be more effective to release the first finger (though not in the present exercises). Again, this is explored more fully in Part 2.

NOTE: the forearm has a natural tendency to rotate during an ascending shift, with the result that the hand (and especially fingers 3 and 4) will lose its optimal positioning. If, on the other hand, a forearm rotation is actually required for the new position, this should indeed take place during (or even before) the shift. Again, this is explored more fully in Part 2.

Descending Shifts
Longer and other more challenging shifts and shifting techniques (including the role of the arm) are explored in Part 2.

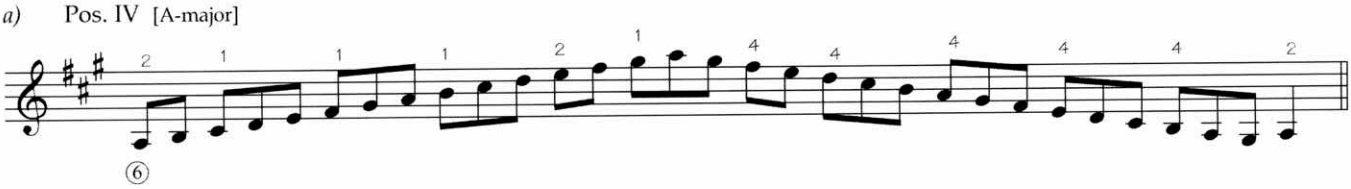
Lesson 25—Fixed-Position Scale Practice

independence and coordination between the fingers and the hands · control of tension and lightness of touch · maintaining optimal string crossing with both hands · developing an optimal foundation for faster and more complex scales

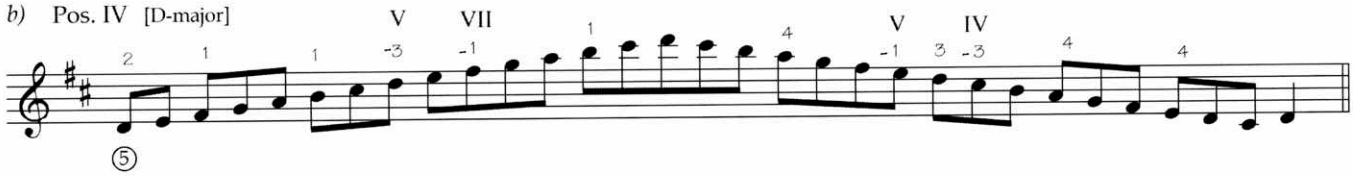
Fixed-position (moveable) scales with preset fingerings are a useful way of developing and maintaining right- and left-hand finger independence and coordination, independence and coordination between the two hands, control of tension in the left hand, and optimal string-crossing technique (for both hands). The goal of this lesson is to develop lightness and control in scale playing at a moderate tempo.

- Explore the following fixed-position scales (two diatonic, two abstract):

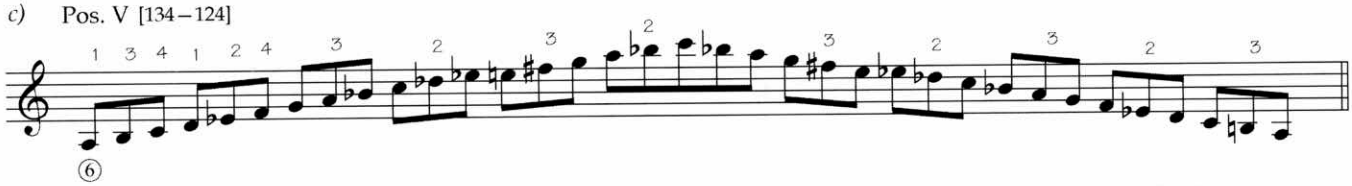
a) Pos. IV [A-major]



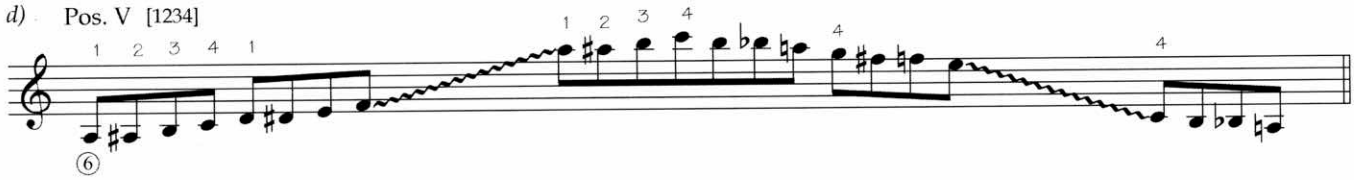
b) Pos. IV [D-major]



c) Pos. V [134–124]



d) Pos. V [1234]



- Practice these scales in their descending-ascending form as well, beginning and ending on string ① instead of string ⑥.

- Memorize each scale and initially practice left-hand-only and then with **im** alternation, both as follows:

  1. pausing on the last note of each string (the next finger to play should be prepared over the new string; the left-hand fingers and thumb should be quite relaxed)

2. pausing on the first note of each new string (the remaining fingers should now be prepared over their frets; again, the fingers and thumb should be quite relaxed)

Be sure to use an arm movement to carry the fingers (and thumb) to each new string.

When playing with both hands, each string change should be prepared by placing the lead right-hand finger on the new string.

In addition, when practicing scale b), also pause: 1) on the note before each shift; 2) on the first note in the new position.

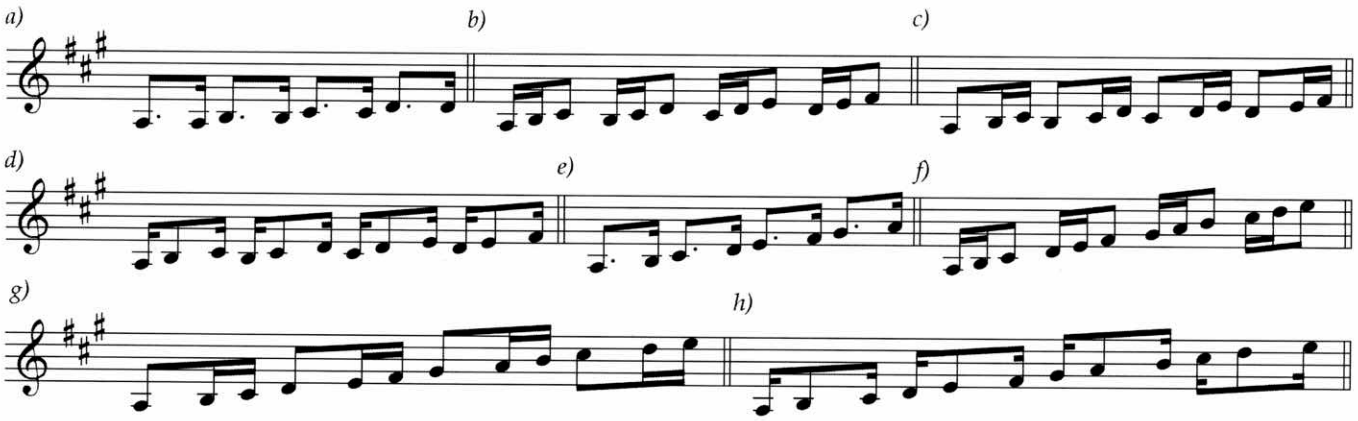
- Following this, play the scale straight through at a moderate tempo without pauses.

Practice Methods

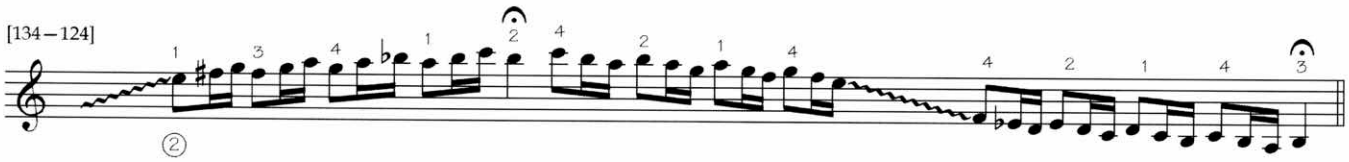
Once the four scale-patterns are comfortable they can be practiced in the following ways to refine, contextualize, and maintain the basic scale technique:

Rhythmic Variation

- using the longer notes to assess the preparation and relaxation of the fingers and thumb:

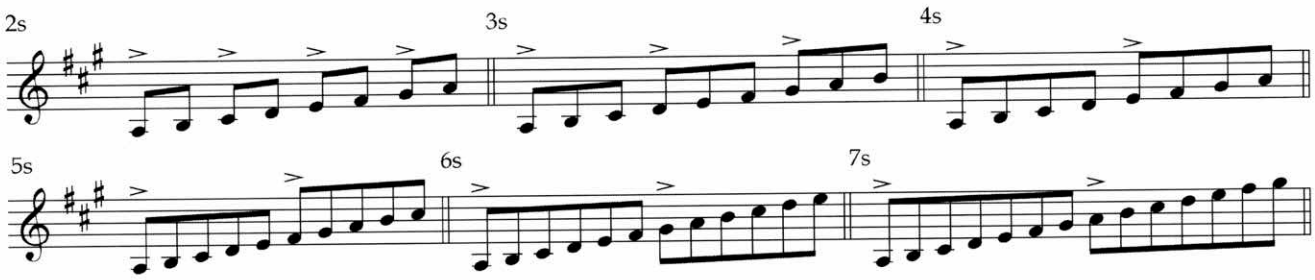


- pausing on the highest note of the scale before descending; patterns **134—124** and **1234** will pause on finger **2** when ascending and on finger **3** when descending. For example:

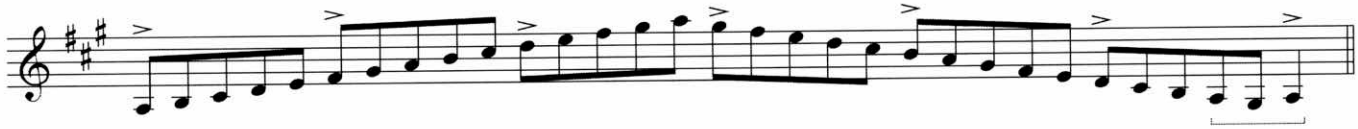


When practicing the two abstract patterns (scales c & d), it can be helpful to say out loud the left-hand finger that begins each beat as you play through the exercise (in the above example, for instance, "*1 – 3 – 4 – 1 – 2 / 4 – 2 – 1*," etc.).

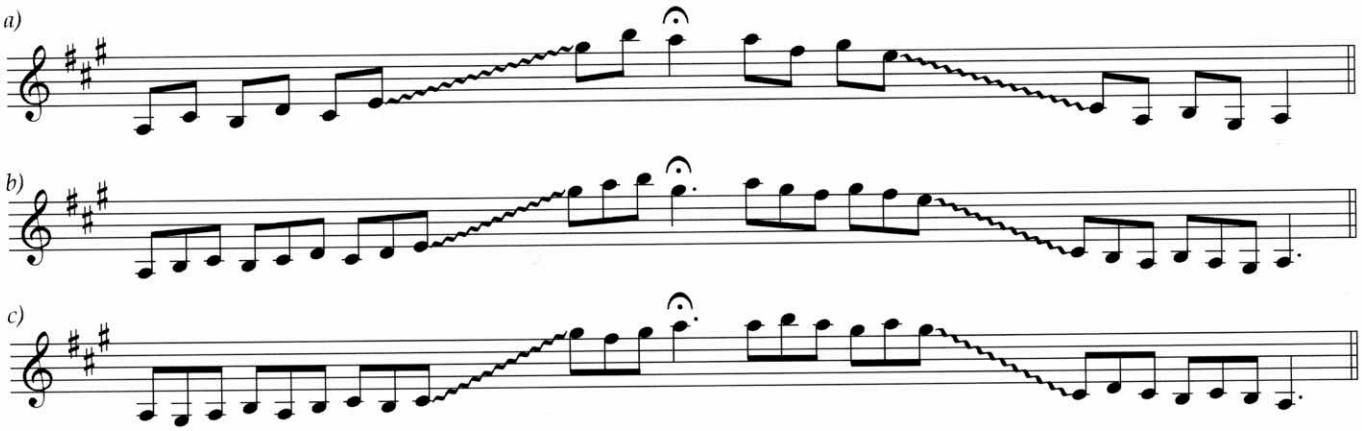
- Practice the following note groups using **im** and **mi** in both forms (starting on ⑥ and starting on ①) **without** pausing on the highest (or lowest) note: *Note Groupings*



Some groupings (3s, 5s, and 6s) require a returning figure at the end:



- Use the following melodic sequences for the single-position scales (except for b): *Sequences*



  - pause on the highest note of the scale before descending (again, patterns **134**—**124** and **1234** will pause on finger **2** when ascending and on finger **3** when descending)

    When consecutive notes are found at the same fret on different strings, for the sake of this exercise, jump the left-hand finger between the strings involved.

  - practice at three dynamic levels: ***p*** – ***mf*** – ***f*** and crescendo (ascending)—diminuendo (descending)

- Practice each scale as a straightforward play-through using each of the following right-hand finger combinations: *Right-Hand Fingerings*

im	**mi**	**ma**	**am**

- pause on the highest note before descending again and practice as follows:

  1. with rest stroke (see Lesson 13) as well as with free stroke, saying out loud the right-hand finger that leads each string crossing

  2. with strict **ami** alternation (saying out loud the right-hand finger name for each note as you slowly play through the scale)

Practice Routine

Practice each of the four scales in both forms (ascending-descending and descending-ascending) each day, using the initial practice methods (pausing before / after each string crossing as well as playing straight through) until memorized and comfortable. Then take one scale each day over a four-day cycle and add the remaining practice methods (c. 10 min.):

1. rhythms (ascending-descending form only)
2. note groupings (both forms)
3. sequences (ascending-descending form only)
4. right-hand combinations (ascending-descending form only)

A Practice Grid is provided in Appendix 3.

Remember, the goal of this lesson is for lightness and control at a moderate tempo (further practice methods and fast scale-playing are fully explored in Part 2).

NOTES

Fixed-position scales are of limited use in actual pieces of music (where scales usually need to be fingered and practiced on a case-by-case basis). In my view, there's little need, therefore, to learn and practice more than a few fixed-position scales to use as technical exercises (most grade-exam syllabuses disagree with this assessment however!).

The main goal of the exercises in this lesson is to develop and maintain left- and right-hand finger coordination and independence in the context of moderate-tempo scales and to provide a foundation for more advanced and faster scales in the future (additional scale techniques, including scales at speed, and practice methods are developed in Part 2).

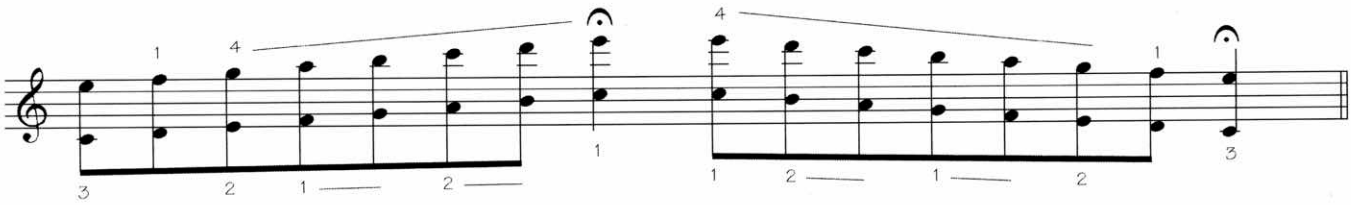
Lesson 26—Interval Scales

common diatonic interval scales · modified role of the thumb

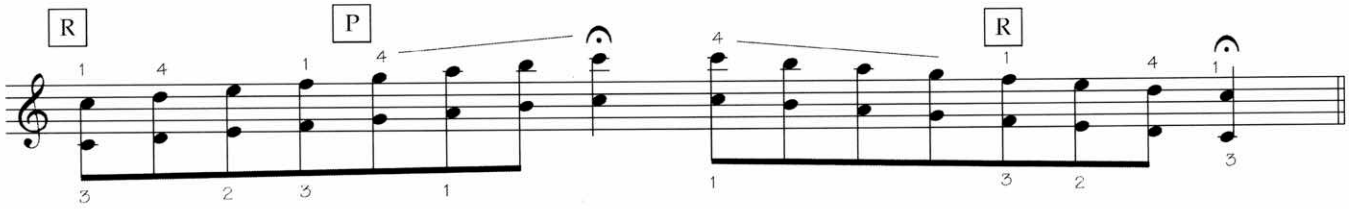
While fixed-position scales employ somewhat abstract fingering patterns, interval scales are much more representative of the finger movement and position shifts encountered in actual pieces of music. In this lesson we'll explore a basic set of these scales along with the shifting techniques used to play them.

- Explore the following five interval-scale fingerings:

1) C-major in 10ths—**4** stays on string ①; **2** and **1** switch-out on string ④

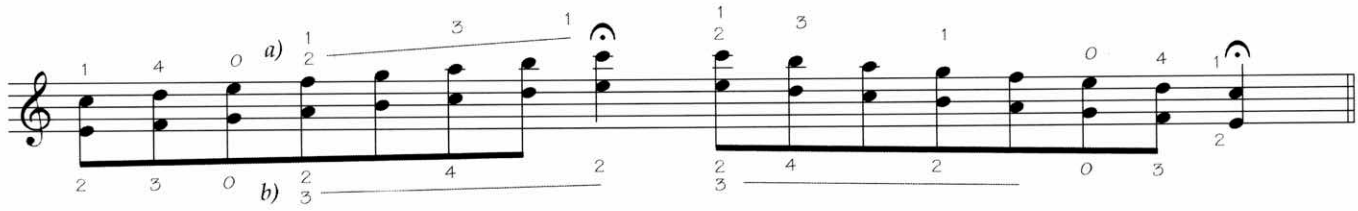


2) C-major in 8ves—**4** stays on string ①; switch between rotated (**R**) and parallel positions (**P**)



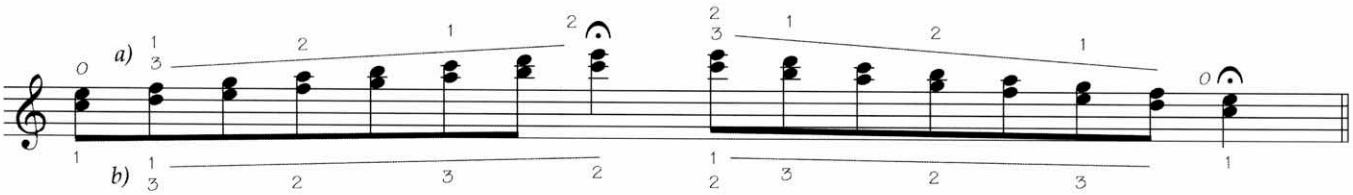
3) C-major in 6ths—two fingerings:

a) 2 stays on string ③; **1** and **3** switch out on string ①
b) 3 stays on string ③; **2** and **4** switch out on string ①

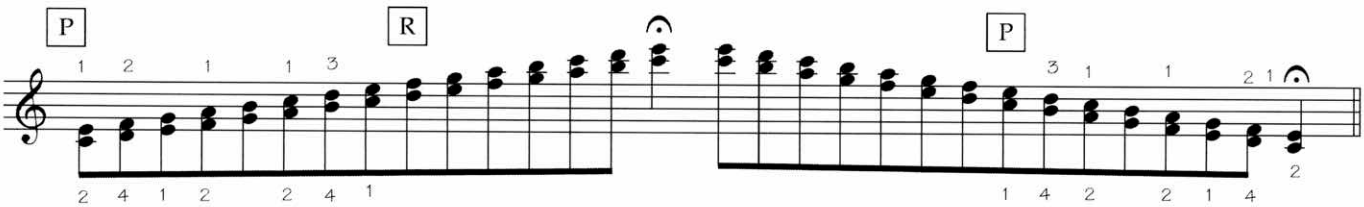


4) C-major in 3rds (1 octave)—two fingerings:

a) **3** stays on string ②; **1** and **2** switch out on string ①
b) **1** stays on string ①; 2 and **3** switch out on string ①

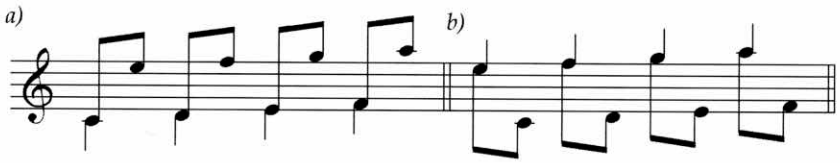


5) C-major in 3rds (2 octaves)—use the fingerings indicated for the lower octave (parallel position) and the fingerings from 4) above for the upper octave (rotated position)



- Practice each scale in Slow-Fast alternation and as follows:

1) in diads, as written
2) in broken intervals, in two ways as follows:



Role of the Thumb

In situations of constant position change such as these, the left-hand thumb can no longer release before each change of position. Instead, it maintains its optimal relationship with the fingers by making minimal contact with the guitar neck. Assess the disposition of the thumb on each fermata in the scales above (by removing it from the guitar neck, replacing it, and checking if the position was correct.

Practice Routine

Play through these scales each day for a week or two, using Slow-Fast alternation, Rhythmic Variation, and the two broken-interval patterns provided (c. 4').

> The early nineteenth-century repertoire provides many examples of interval studies that can be used for maintenance, Sor *Op. 6 No. 10* being one of them. The interval studies that comprise Part 2 of Giuliani's *Studio, Op. 1* are especially useful.

Lesson 27—Ascending Slurs

finger position and tension levels · single fingers and ascending finger pairs · ascending three and four-finger groups · ascending slurs from open strings · practice methods

Slur exercises are among the most useful things a guitarist can practice. Not only do they help us deal with slurs in our pieces, they also provide an indispensible approach to developing finger control, independence, and coordination, along with refinement of the left-hand position for playing single-line melodies and scales.

Effective slurring technique relies on precision, timing, and touch, and for this reason benefits from practicing with the left hand alone as well as with the hands together.

Hand and Finger Position

Adjustments of the position of the hand and fingers required for slur playing:

1) use a parallel or close-to parallel hand position (for these exercises, and other slurred passages, whenever possible)

2) the fingers are generally slightly more curled at the middle joint than for normal playing (raise the position of the thumb a little)

Control of Tension

Three factors regarding tension levels during an ascending slur:

1) the slurring finger moves quickly to execute the slur and relaxes to a sustaining pressure immediately after sounding the note

2) when slurring between two fretted notes, the non-slurring finger (which holds the lower note of the slur) maintain sustaining pressure only and relaxes to a passive state following the slur

3) the left-hand thumb maintains its normal light contact with the guitar neck and doesn't react to the slur

Explore each of these aspects individually as you work through the exercises.

Preliminary Exercises

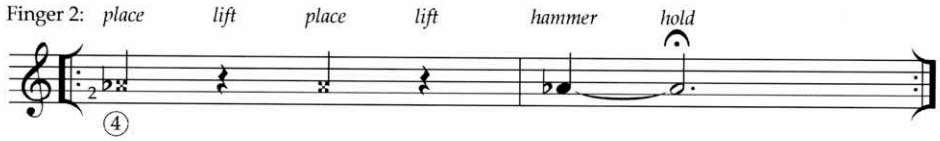
Single Fingers

- Establish an optimal hand position on string ④ in the fifth position and explore a simple single-finger ascending hammer-on with finger **2**, left-hand only (**Ex. 1**):

  1) place and lift the finger a few times at a moderately slow speed paying attention to the precise contact point the fingertip makes with the string

  2) lift the finger a little higher and hammer-down onto the string:

LH 27
Slurs



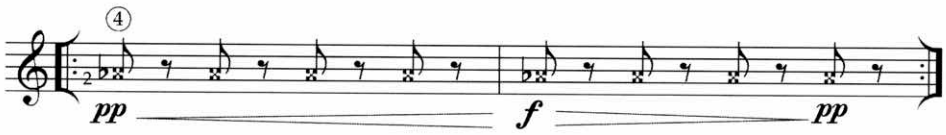
Bear the following in mind:

- slightly tightening the curvature of the finger enhances accuracy
- the initial movements are slow, careful, and silent
- the hammering action is a slightly larger and a much faster movement
- the finger relaxes to sustaining-pressure immediately after executing the hammer-on
- the left-hand thumb remains relaxed throughout
- (the right hand doesn't play)

- Repeat this process, alternating between small controlled movements and a more dynamic hammering action until the slur feels comfortable.

- Practice the same thing with each finger.

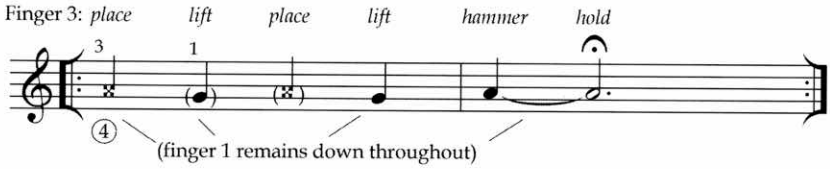
- Practice each finger in a series of hammer-ons (again left-hand only) using the following dynamic scheme (**Ex. 2**):

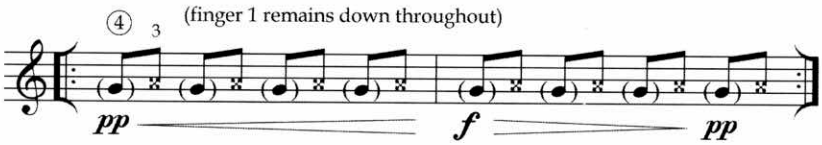


Finger Pairs

When slurring between a pair of fingers, the first of the pair remains on the string while the next hammers, relaxing to a passive state once the slur is completed.

- Establish optimal positioning for the slur by placing the fingers involved on the string together and practice **Exs. 1 & 2**, left-hand only, as follows:





- Explore the six finger pairs:

12	**13**	**14**	**23**	**24**	**34**

- Explore the following common three- and four-finger combinations:

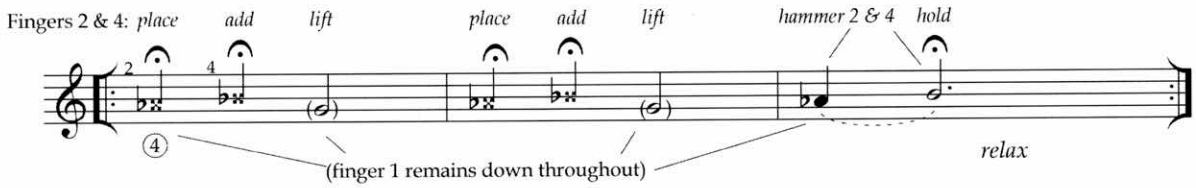
Three and Four-Finger Groups

124	**134**	**1234**

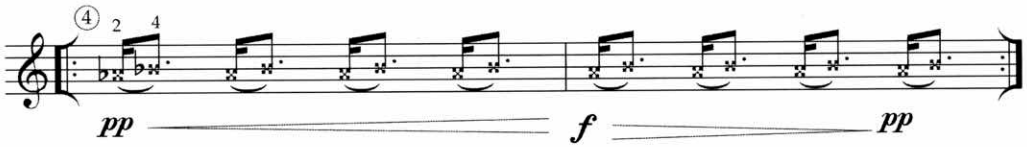
- Proceed as follows (using **124** as an example):

  1) establish optimal positioning (place all of the fingers on the string) and slowly lift fingers **2** & **4** together while finger **1** remains on the string

  2) hammer-on finger **2**, then finger **4** and relax-down to sustaining-pressure



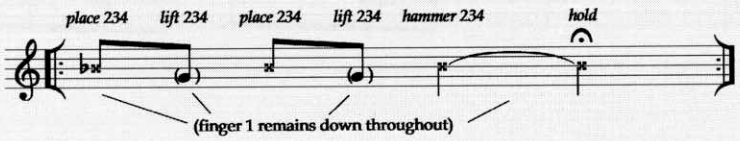
- Focus on the final hammered-note as you create the indicated dynamics (leave all three fingers on the string during each long note):



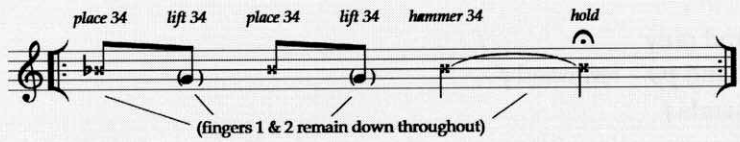
As you work through these exercises, be sure to explore the relative lightness of the thumb and non-slurring finger, as well as the relaxation that should occur following the slur.

Fly-Away Fingers

To help develop control over fly-away fingers, practice slurring from finger **1** to fingers **234** simultaneously:



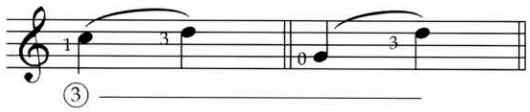
And from fingers **12** to fingers **34**:



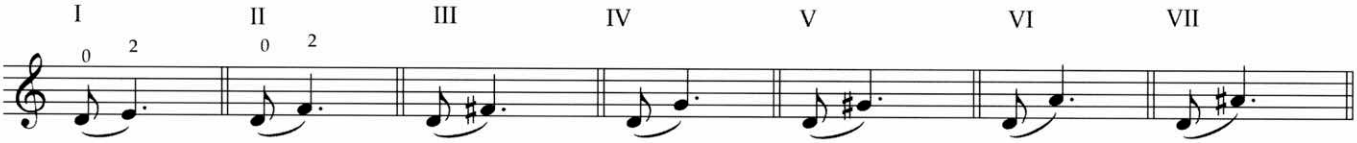
Further exercises for developing control over the less independent fingers are provided in Part 2.

Slurring from Open Strings

When slurring from an open string the slurring finger no longer has the advantage of a stable reference point and the height of the string above the fret is increased as well. Slurring from an open string therefore requires a higher degree of precision:



- Starting in the first position, gradually increase the distance between the open string and the slurred note—the higher the position, the higher the string action and the more precise the finger position and slur need to be:

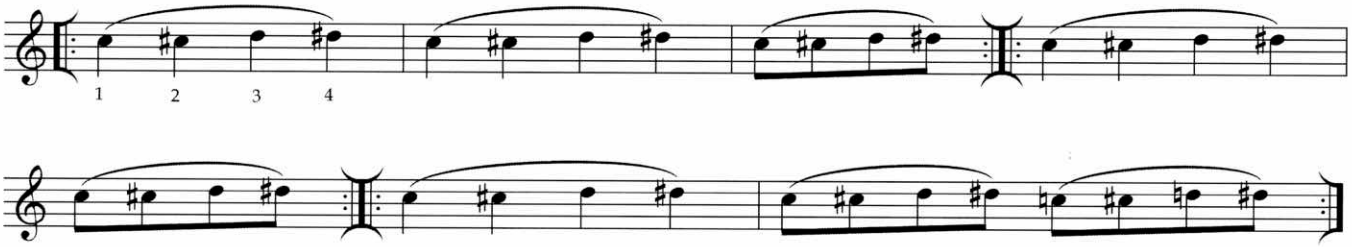


- Explore each finger in the same way, bearing in mind that the precision of the finger movement can be enhanced by a slight increase in the curvature of the slurring finger (facilitated by a small upwards repositioning of the thumb).

Practice Methods and Contextualization

Once the preliminary left-hand-only exercises are comfortable, work on all finger pairs and the common three- and four-finger patterns using the following practice methods:

1) Slow-Fast Alternation



2) Dynamics

1) left-hand only
2) right-hand ***pp***—left hand ***f***
3) both hands ***f***
4) a continuous series of slurs played crescendo-diminuendo in both hands

3) Rhythmic Variation

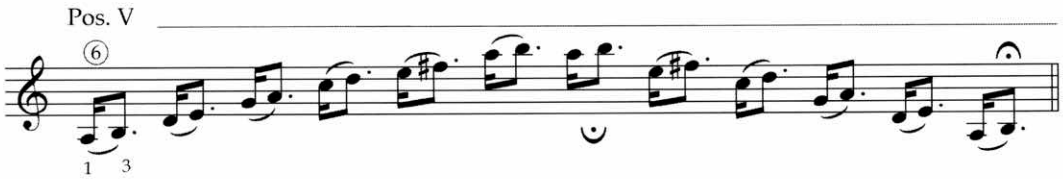
2-note groups become:

3-note groups become:

4-note groups become:

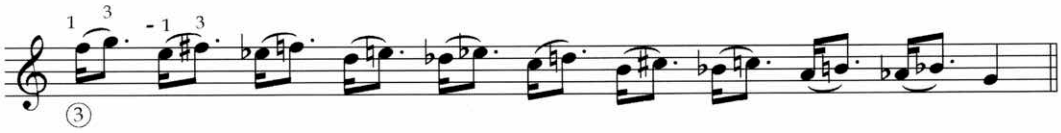
4) Contextualization (use the shifting technique described in Lessons 23 & 24)

a) practicing a pattern across the strings:



(As one finger hammers, the lower finger releases and moves to the next string.)

b) starting in position X and moving down gradually to position I (and vice versa):



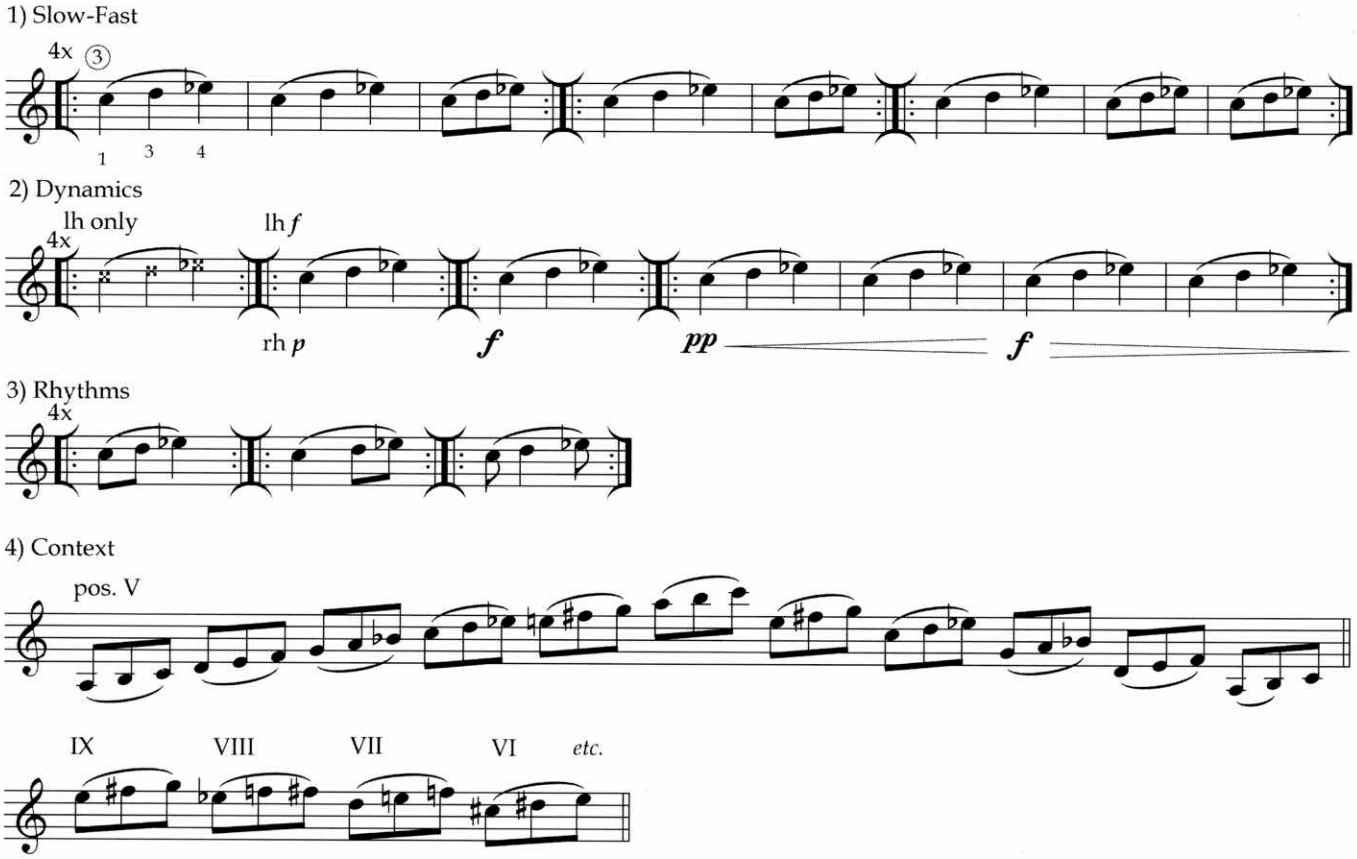
These four practice methods can also be combined with one another for further practice of patterns that you feel may need more work.

Practice Routine

Practice **01—02—03—04** daily along with the following three-day practice cycle for a few weeks (a Practice Grid is provided in Appendix 3) (c. 6 minutes per day):

Day 1	Day 2	Day 3
12 —34—124	**13—24—134**	**14—23—1234**

Here's the complete practice routine written out for pattern **134** (repeat each four times):



NOTES

The slur categories in progressive order are as follows:

1. *ascending*
2. *descending*
3. *compound* (combined ascending and descending)
4. *short ornaments*
5. *other compound slurs*
6. *gymnastic slurs*

The first three categories are explored here in Part 1, the remainder are reserved for Part 2.

The volume and clarity of an ascending slur results from the speed and directness of the finger movement rather than from force or pressure. While a strong plucking impulse from the right hand also transfers into the slurred note (assuming the hammering motion is quick enough) it's important to develop the ability to control the volume of the slurred note through the hammering action of the slurring finger itself.

Hand and Finger Position
A parallel (or close to parallel) hand position is preferable for optimal positioning and accuracy (especially to accommodate fingers **3** and **4**). Increasing the curvature of the slurring finger a little at the middle joint (by raising the position of the thumb a little) improves the accuracy of the hammering motion, especially for players with relatively long fingers. Increased finger curvature requires a less rotated hand position (again, especially for fingers **3** and **4**).

Control of Tension
An effective ascending slur requires a fairly quick movement of the slurring finger, which can easily translate into unnecessary tension both before and following the slur. This aspect must therefore be carefully monitored.

Preliminary Exercises—Single Fingers
Practicing with varied dynamics helps develop the accuracy and speed of the finger movements, as well as control of tension levels in the slurring finger.

Preliminary Exercises—Finger Pairs
In normal playing, especially in faster passages, fingers are placed and lifted individually. Nevertheless, for the sake of positioning and stability, leaving fingers down is a good preliminary practice strategy.

Practice Methods and Contextualization

1) *Slow-Fast Alternation,* again, combines the control of slow version with the lightness and automation of the fast version.

2) *Dynamics* develop coordination and rhythmic and dynamic control between the left-hand fingers and between the two hands:

1. *left-hand only*—since we hear the hammer-on only, this is an ideal method of checking the strength and evenness of the slur
2. right-hand plays ***pp*** / left hand plays ***f*** develops independence and coordination between the two hands
3. both hands play ***f*** helps internalize and coordinate the left-hand movements and develops coordination between the two hands
4. a continuous series of slurs played crescendo-diminuendo in both hands develops coordination between the two hands and control over tension levels between the fingers and the hands.

3) *Rhythmic Variation* further develops rhythmic control, precision, and speed.

4) *Contextualization* helps assimilate and internalize the movement form.

Lesson 28—Descending Slurs

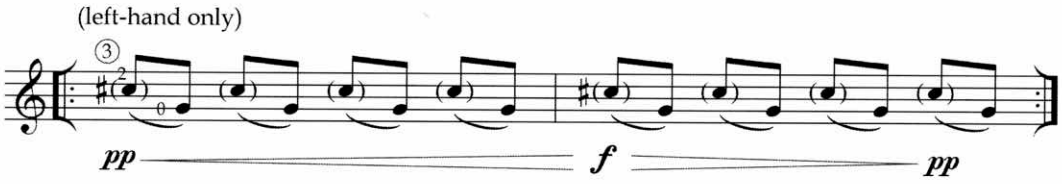
action of the slurring finger · descending finger pairs—tension levels and independence · simultaneous finger placement · descending three- and four-finger groups · lower-position slurs

Descending slurs are especially useful for developing left-hand finger coordination, independence, and control over tension levels. Descending slur technique, however, is somewhat more involved than that for ascending slurs. While the same considerations regarding hand position apply, the movements and control of tension in both the slurring fingers and the fretting fingers are more sophisticated. Because of this, descending slurs are more difficult to play accurately and can easily become a source of tension in the left hand. In this lesson we'll explore descending slurs with single fingers and finger-pairs, reserving three- and four-finger descending slurs for the next lesson.

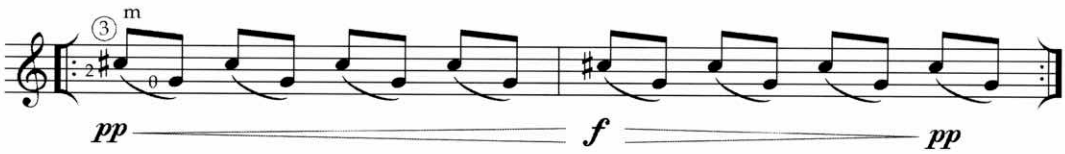
The Slurring Finger

The action of the slurring finger is essentially nothing more than a simple plucking action:

- Pluck the open third string around fret 5 with each left-hand finger using a gentle rest stroke (the finger comes to rest on string ②).
- Establish the optimal left-hand position with the four fingers on string ③ in position five. Taking each finger in turn, fret the string and then pluck it with the fretting finger (which comes to rest against string ② after plucking). Bear the following in mind:
    - the left-hand finger frets with sustaining-pressure only
    - it activates for an instant to execute the slur and returns to a minimal tension level as it rests against string ②
    - the hand itself remains stationary
    - the left-hand thumb makes only a light contact with the guitar neck throughout
    - the right-hand doesn't play
- Play a series of slurs with dynamics, exploring one finger at a time (again, left-hand only):



- Pluck with the right hand as well (which, when *forte*, requires an additional fretting impulse from the slurring finger):



Finger-Pairs

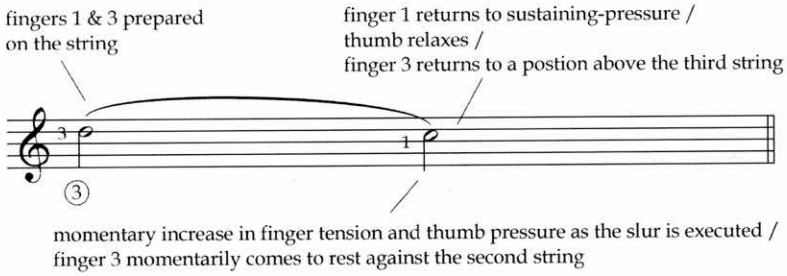
A descending slur between two fretted notes requires the lower finger to resist the plucking action of the slurring finger.

- Rather than applying significant pressure between the fretting finger and the thumb, the finger simply maintains its curvature (which doesn't need to be rigidly locked either) within an overall light touch.

- The thumb contributes to the overall stability of the hand and finger by adding a slight and momentary increase in pressure at the instant of the slurring action.

> **If the fretting finger moves along with the slurring finger** (especially the less independent fingers **3** & **4**) a slight pitch-bend will be heard just before the actual slur. To counteract this, and to help develop the required independence between the fingers, explore gently pushing the fretting finger upwards as the slurring finger pulls downwards.

- Add the return of the slurring finger to a position above its original string to complete the slur:



> **Checklist**:
>
> - the fretting finger is prepared on the string with sustaining-pressure and applies impulse-pressure only as the right hand plucks the string
> - tension increases only at the instant of executing the slur and is released immediately
> - following the slur: the fretting finger immediately returns to sustaining pressure, the thumb returns to a light contact, and the slurring finger returns to a position above the original string

- Explore each finger pair:

21	**31**	**41**	**32**	**42**	**43**

(When working on the less independent finger pairs—**32**, **42** and **43**—you may wish to initially keep the first finger on the string for increased stability.)

Simultaneous Placement of Fingers (Incorporating Open Strings)

In normal playing situations, the fingers involved in a descending slur are usually placed on the string simultaneously.

- Explore this aspect by adding an open string to each finger pair:

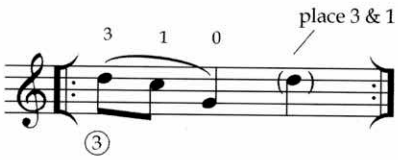
210	**310**	**410**	**320**	**420**	**430**

These patterns consist of a sequence of two descending slurs:

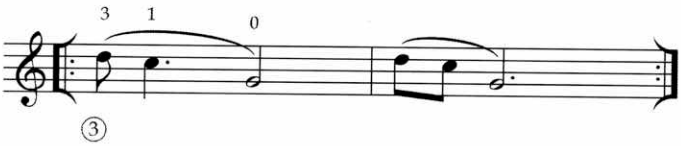
1. at slow tempos: the fretting finger and thumb re-activate to execute the second slur

2. beyond slow-moderate tempos: the double slur becomes a single gesture in which the fingers and thumb activate once only

After executing the slur allow both fingers to rest on the next string before placing them back on the original string in preparation for the next repetition of the slur:



- Explore this with each finger pair using the following rhythmic pattern:



- Also practice this exercise with individual finger movements, returning the slurring finger to the string as the next finger slurs.

Practice Routine

When comfortable, practice these patterns with the methods provided in the previous lesson (Slow-Fast, Dynamics, Rhythmic Variation and Contextualization), practicing individual fingers each day along with the following three-day practice cycle (c. 6 minutes per day, a Practice Grid is provided in Appendix 3):

Day 1	**Day 2**	**Day 3**
1—2—3—4 **21—210—43—430**	**→** **31—310—42—420**	**→** **41—410—32—320**

NOTES

The Slurring Finger
It's important that the simple sensation of plucking with a left-hand finger becomes indelibly associated with your descending-slur technique.

In these exercises, the slurs are accomplished by movements of the fingers only. The contribution of arm movement to slurring is explained in the next lesson.

Finger Pairs
This all surely sounds a little over-complicated, but control of tension during a descending slur is essential not only for efficient technique but also for the rhythmic accuracy of the slur iself—if tension is placed into the slurring finger too soon the finger will activate early and either rush the slur or retain tension unnecessarily.

Simultaneous Placement of Fingers (Incorporating Open Strings)
Practicing with individual finger-movements enhances coordination and prepares for slurring in conjunction with string crossing.

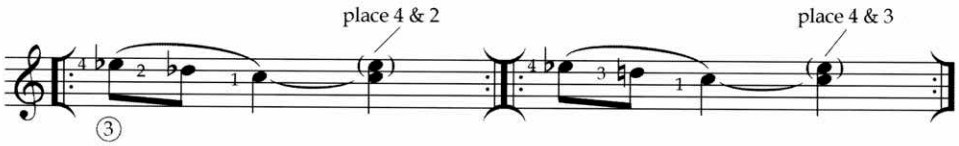
Lesson 29—Three and Four-Finger Descending Slurs

the common three and four-finger combinations · slurs in the lower positions · role of the arm · the musical shape of a slur

In this lesson we'll look at the common diatonic three-finger combinations **421** and **431** and the chromatic combination **4321**. We'll also take a look at slurring in the lower positions.

The Three-Finger Diatonic Figures ***421 and 431***

These figures combine a fretting-finger with two slurring fingers. At moderate to fast speeds, treat the slurring pair as a compound gesture which is momentarily opposed by the fretting finger and the thumb. The two slurring fingers momentarily rest together on the next string and return together to the original string:



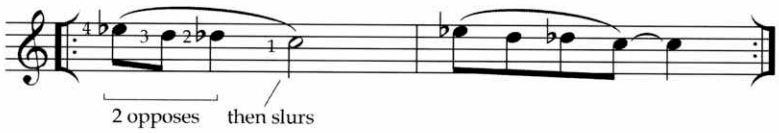
Also explore **321** and **432** as a preparation for the even trickier **4321** (when practicing the **432** group, you may initially wish to keep the first finger on the string for extra stability).

- Practice with the methods provided in Lesson 27 (Slow-Fast, Dynamics, Rhythmic Variation, and Contextualization).

The Four-Finger Chromatic Group ***4321***

The **4321** descending figure is challenging to play accurately and, if only for this reason, is worth practicing (it also crops up in the repertoire now and again).

- Thinking of the **432** unit as a composite gesture, aim for finger **2** and follow this with an independent action of finger **2**:

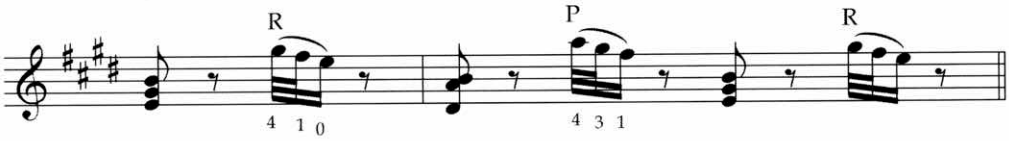


(Again, **234** momentarily rest together on the next string before returning to the original string together.)

Slurs in the Lower Position

While four-fret diatonic figures such as **421** and **431** require a parallel (or near-parallel) hand position in the lower positions (and perhaps a degree of lateral finger extension), it's common to play three-fret intervals using a rotated hand position, substituting **41** for **31**:

SOR, *Etude Op 6 No 3*



When working on pieces such as this, explore each figure for optimal hand position and then apply the practice methods we've used in this lesson.

Use of the Arm
So far, we've practiced descending slurs using finger movements only, something that's essential for finger training and for precise playing. It's also possible, however, to incorporate a small rotation of the arm in conjunction with the action of the slurring finger (and sometimes even without the action of the finger). Assisting the action of the slurring finger with a small arm movement reduces the work of the finger and allows a momentary relaxation of the fingers. Since this type of slurring takes the fingers out of position, it isn't used in the midst of intricate passagework. It can, however, be used at the end of an intricate passage or when a note slurs onto an open string (where the open string provides time for the hand to return to its normal position). Try this with the Sor *Etude* shown above.

The Musical Rhythm of a Slur
Musically speaking, *couplets* and other slurred note groupings are generally played with a slight lengthening of the first note of the pair or group (and, on many instruments, with a degree of staccato on the concluding note). In many instances, however, and especially in guitar music, slurs are not strictly intended to be played as musical note groups. Nevertheless, when played exactly in time, slurs on the guitar have the curious effect of sounding rushed. We should therefore develop the habit of very slightly lengthening the first note of a slur in order to have it sound as though it's being played in strict musical time:

Practice Routine

Using the four practice methods described in Lesson 27 (Slow-Fast, Dynamics, Rhythmic Variation, and Contextualization) work on the descending slurs explored in this lesson over the following three-day practice cycle for a few weeks (c. 6 minutes per day):

Day 1	Day 2	Day 3
421—4210—321—3210	**431—4310—432—4320**	**4321—43210**

A Practice Grid is provided in Appendix 3.

NOTES

The Three-Finger Diatonic Groups 421 and 431
In fast descending slurred scales (and other passagework) the fingers usually return individually (a more advanced technique dealt with in Part 2).

The Four-Finger Chromatic Group 4321
The difficulty lies in controlling the tension level of the three successive non-independent slurring fingers, **432**. Think of **432** as a composite unit (analogous to the **ma** compound stroke in right-hand arpeggio technique) momentarily opposed by **21** and the thumb. This is followed by a **21** descending slur momentarily opposed by finger **1** and the thumb. Of course, finger **3** must oppose the **43** descending slur before playing its own slur (however, this finger has fingers **1** and **2** to help and is therefore a little easier to control).

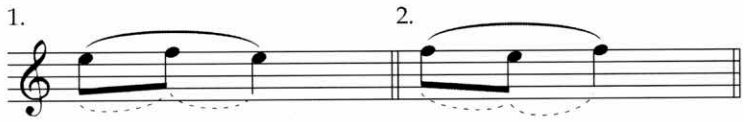
Lesson 30—Compound Slurs

ascending-descending compound slurs · descending-ascending compound slurs · practice routine and contextualization

In musical situations, we often encounter slurs that combine an ascending and a descending slur to produce a compound slur. We'll explore these types of slurs in this lesson.

There are two types:

1) an initial ascending slur followed by a descending slur
2) the reverse



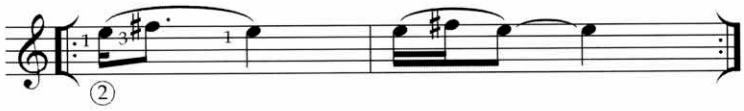
Ascending-Descending Compound Slurs

Ascending-descending compound slurs are often used to play short main-note trills, usually very quickly.

121	**131**	**141**	**232**	**242**	**343**

- Alternate back and forth between two versions of the figure:

  1) pausing after the hammer-on
  2) playing the complete figure



When pausing on the second note, after the initial hammer-on, the lower finger should be quite relaxed and will re-activate during the pull-off. When played quickly, a compound slur feels like a single elliptical motion of the slurring finger which produces both slurs.

Descending-Ascending Compound Slurs

This is the slur-type used to play mordents, again usually very quickly. The technical challenge in this type of slur lies in accurately returning the slurring finger for the hammer-on after it has been pulled away from the string by the initial pull-off.

212	**313**	**414**	**323**	**424**	**434**

- Again, alternate back and forth between two versions of each figure:

1) pause after the pull-off
2) play the complete figure

On the long note, after the initial pull-off, return the slurring finger above the string ahead of time in anticipation of the hammer-on.

Practice Routine and Contextualization

When comfortable with the exercises, practice both types of compound slur with the methods provided in Lesson 27 (Slow-Fast, Dynamics, Rhythmic Variation, and Contextualization) over a three-day cycle as follows:

Day 1	Day 2	Day 3
121—343—313—424	**131—242—414—323**	**141—232—212—434**

Also practice in combination with open strings, again using the practice methods provided earlier:

Day 1	Day 2	Day 3
1210—3430 **3130—4240**	**1310—2420** **34140—3230**	**1410—2320** **2120—4340**

A Practice Grid may be found in Appendix 3.

The following studies (among many others) are useful for practicing and maintaining descending slur technique:

Fernando SOR	*Study in E, Op. 6, No. 3*
Matteo CARCASSI	*Studies, Op. 60, Nos. 4, 9 & 10*
Mauro GIULIANI	*Studies Op. 1, Part 3, Nos. 4—10*
Leo BROUWER	*Simple Studies, Nos. 7 & 9*

NOTES

Ascending-Descending Compound Slurs
The trick to playing this type of slur well is not to be over-concerned about the concluding pull-off part of the figure. It's all too easy to introduce additional tension into the slurring finger early, affecting the accuracy of the initial hammer-on.

Although we would always prefer to use the strongest fingers to play this kind of fast slur in an actual musical situation, this isn't always possible. For this reason, as well as for the general development of the less independent fingers, all of the finger-pairs provided should be practiced.

Further slurred ornaments (longer trills, turns, etc.) are explored in Part 2.

Appendices

Appendix 1—Full Warm-Up Routine

Preparation

1 Fingernail Care and *mise en place*
2 Focusing Exercise and Stretching
3 Establish optimal seating position

Right Hand

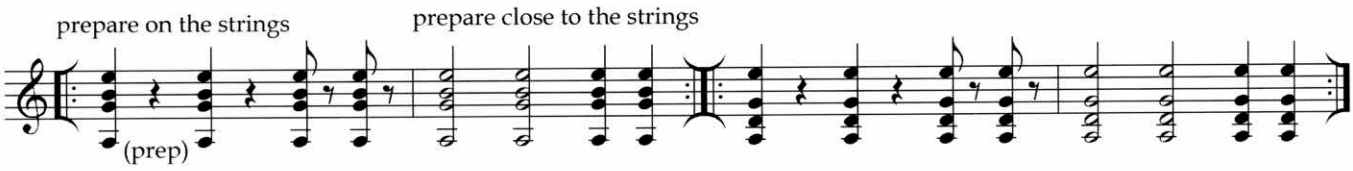
1 Establish the Default Hand Position (Lesson 1)

(Repeat each exercise until comfortable.)

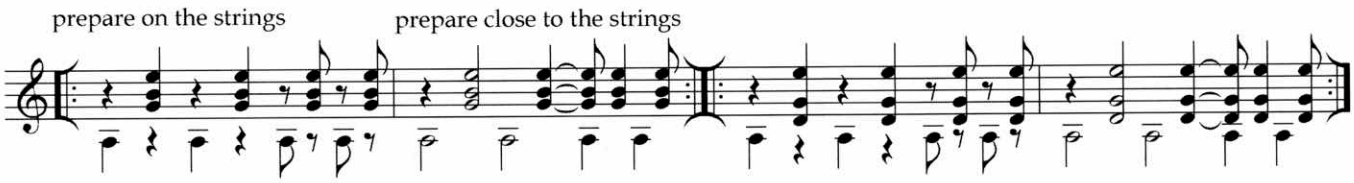
2 Block Chords (Lessons 3-5)

- Place the fingers one per strings, squeeze, and gauge their resistance; establish precise contact points between the strings, fingertips, and fingernails.

- **pima** (preparing both on the strings and close to the strings), as follows:



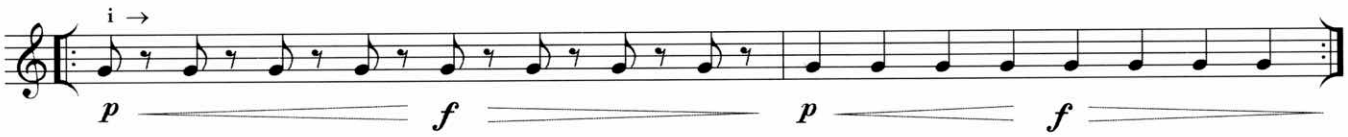
- **p-ima** (preparing both on the strings and close to the strings):



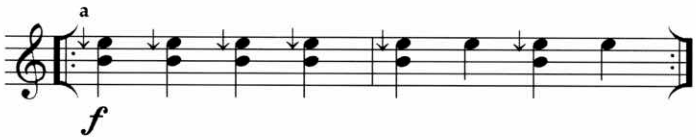
3 Individual Fingers (Lessons 3-5)

- Place the finger on its string; squeeze and gauge the resistance; establish a precise contact point between the string, fingertip and fingernail.

- **p**, **i**, **m**, **a** *and* **c** individually (preparing both on the strings and close to the strings), incorporating dynamics and aiming for optimal free-stroke tone:
- Repeat this exercise plucking two strings simultaneously (with the **a** finger, at

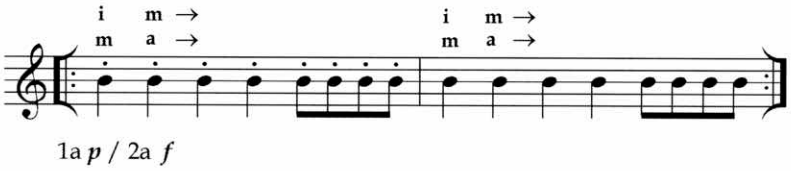


least):

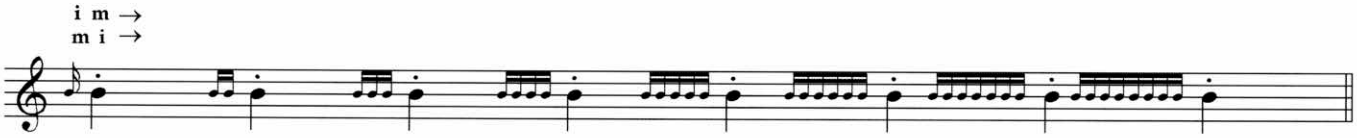


4 Shared-String Alternation (Lessons 9 and 11)

- **im** and **ma** in staccato and legato versions, soft followed by loud, aiming for optimal free-stroke tone:



- **im** and **mi** at speed with a gradual increase in the number of notes, playing each rhythmic group four times: slow followed by fast; then soft followed by loud; free stroke and rest stroke:



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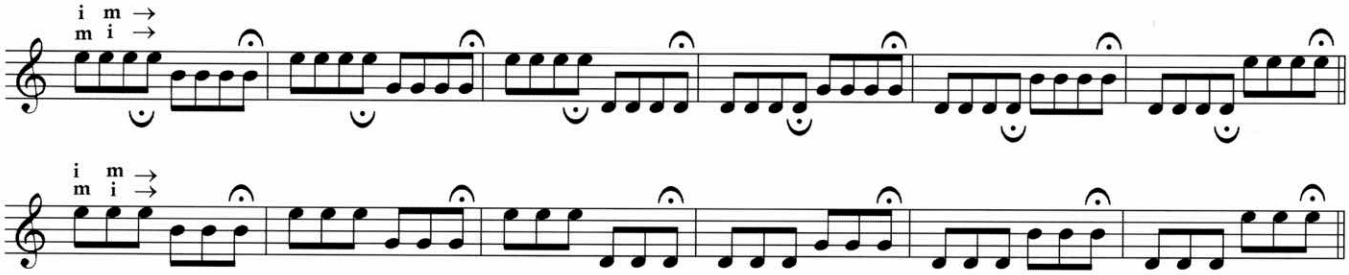
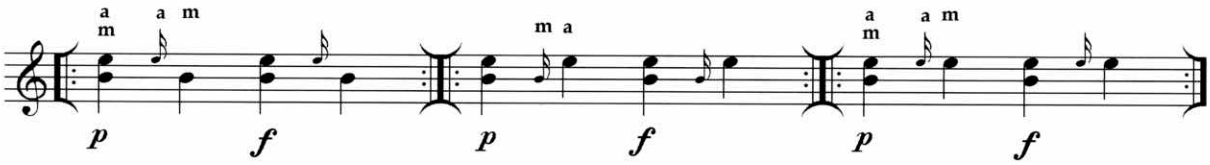
5 String-Crossing (Lesson 9)

- **im** and **mi**:



6 Compound Stroke (Lessons 8 and 12)

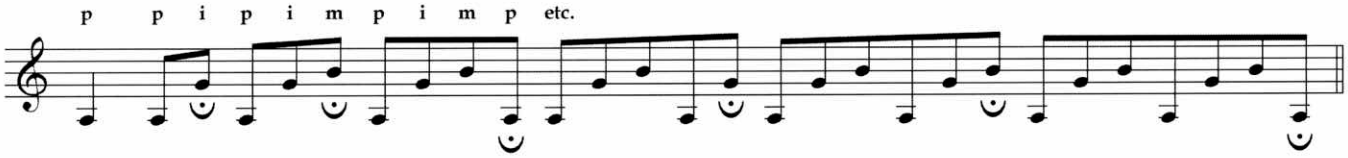
- **am** and **ma**, soft followed by loud; between two strings and on a single string:



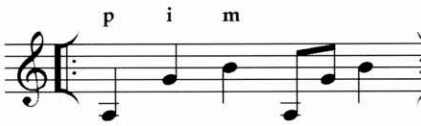
7 Arpeggios (Lesson 7)

- **pim—pmi—pma—pam—pami—pima—pimami**

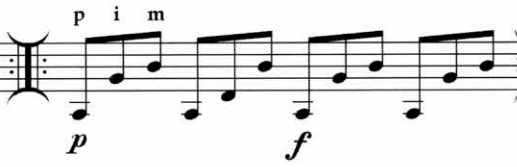
a) sequential addition



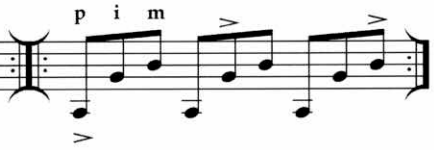
b) slow-fast alternation



c) *p* - *f* alternation



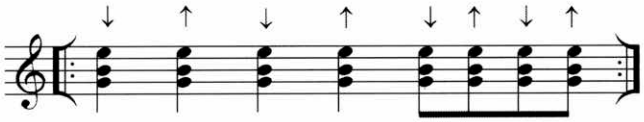
d) accentuation



In exercise d), use both free-stroke and rest stroke for the accented notes.

8 Rasgueado (Lesson 14)

- single-finger rasgueado with **i**, **m**, **a** and **c** individually, soft followed by loud:



1a *p* / 2a *f*

LEFT HAND

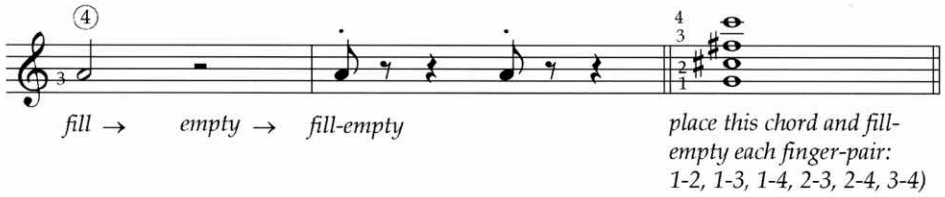
1 Establish the Hand Position (Lesson 15)

- string ④ position V, one finger per string; explore the role of arm weight and the thumb; squeeze-hold to establish fingertip contact points

2 Touch and Sensitivity Exercises (Lessons 18-19):

- Minimum Pressure Exercise with each finger:

- Fill-Empty Exercise (with each individual fingers and with finger pairs), left-hand only; pay careful attention to the thumb:

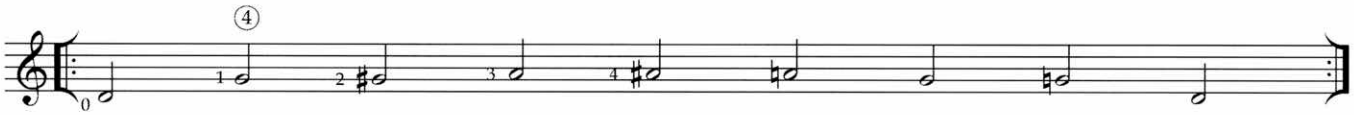


3 Barres (Lesson 17)

- isolate finger pairs with a full-barre in position V

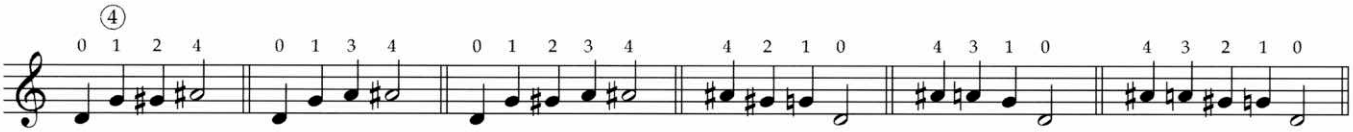
4 Melodic Finger Combinations (Lesson 20)

- focus on precise coordination with the right hand:



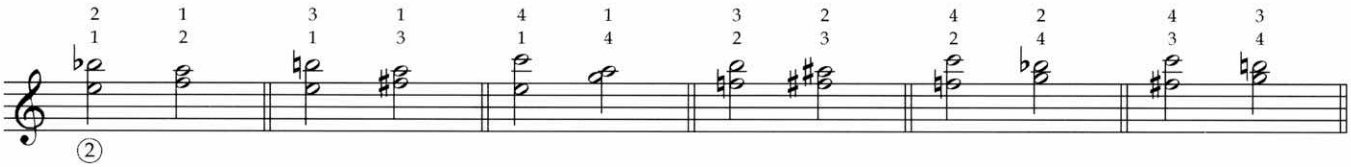
- play the finger combinations below as follows:

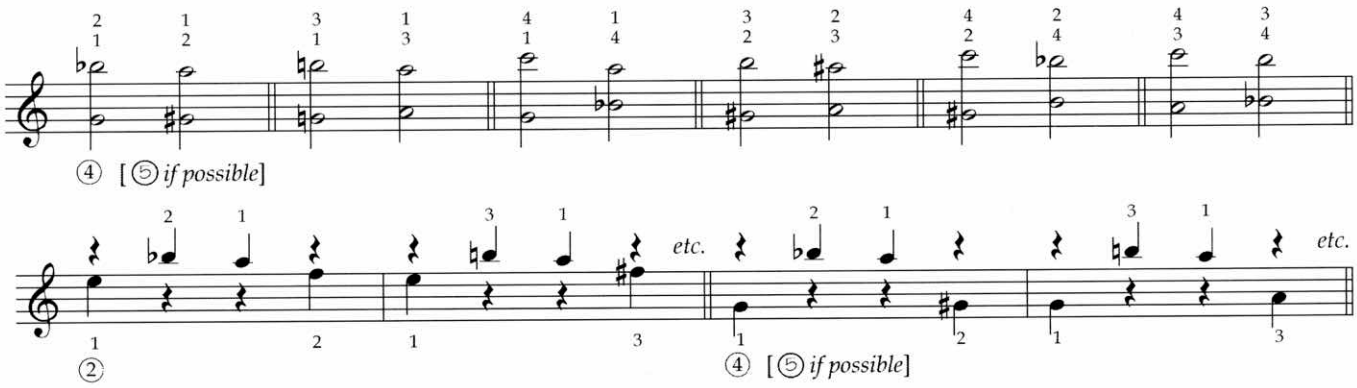
  a) leaving fingers down (asc); placing fingers together (desc.)
  b) exchanging fingers (asc); placing fingers individually (desc.)
  c) ghosting, buzzing, and normal (pay careful attention to the thumb)
  d) slow-fast alternation



5 Finger Pairs (Lesson 22)

- play both the chordal and contrapuntal form; left-hand only

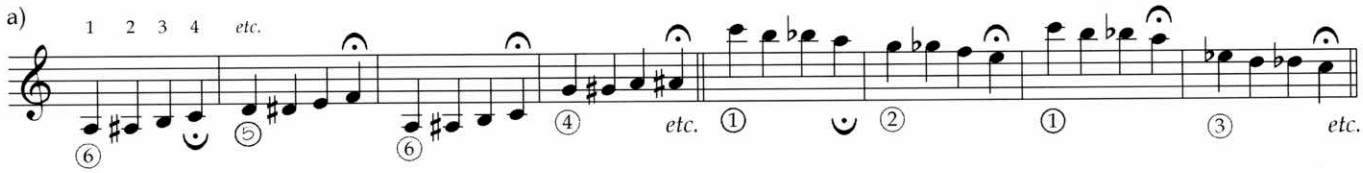




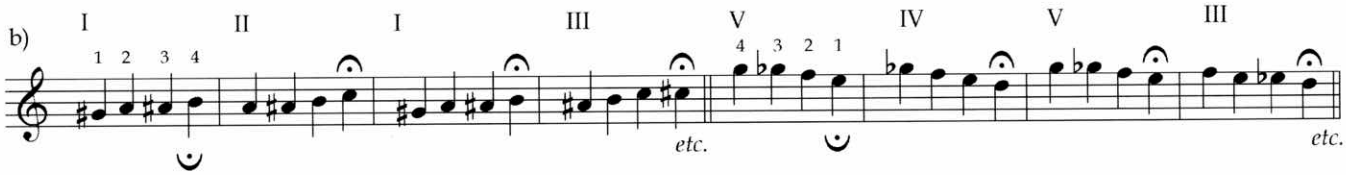
6 Shifting (Lessons 23-24)

- **1234—4321**

  a) crossing the strings



  b) ascending and descending 1, 2, 3 and 4 frets:

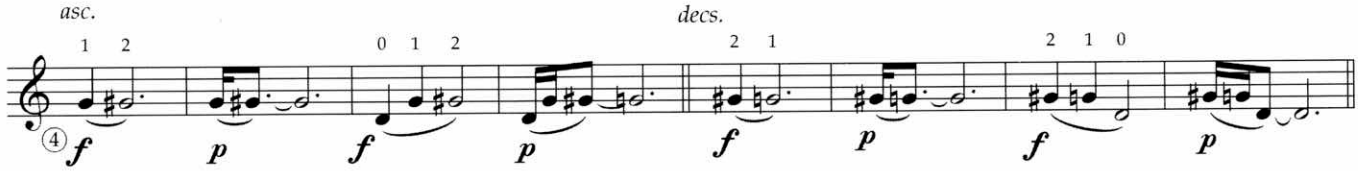


7 Slurs (Lessons 27-30)

- pairs: **12 —13—14** (and the reverse)
- scale fragments: **124—134—1234** (and the reverse)
- compound: **121—131—141—232—242—343** (and the reverse)

- with an initial open string (asc. patterns) or a concluding open string (desc. patterns)

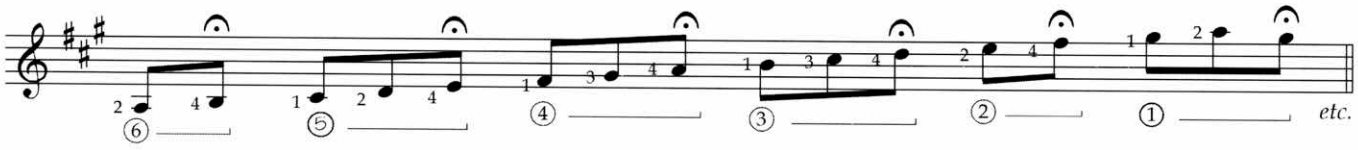
- Slow-Loud—Fast-Soft:



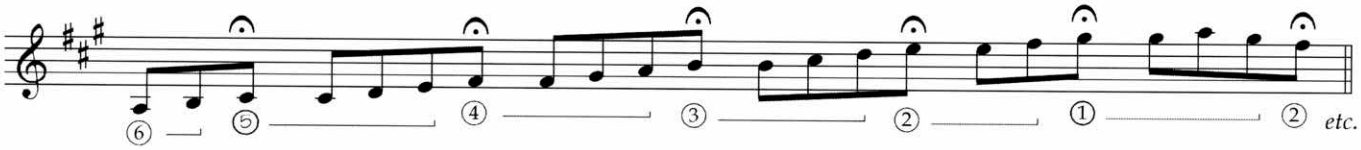
8 Scales (Lesson 25)

- position IV A-major scale; **1234—4321** abstract scale

a) with single-string bursts



b) with a burst to the next string



c) straight-through Slow-Loud—Fast-Soft

d) varying the right-hand fingering from scale to scale:

im	**mi**	**am**	**ma**

The routine presented here is simply an example of the kind of thing one could include in a full warm-up session of around 20′ duration. As you work through the lessons in this book you should feel free to adjust the content according to your particular needs.

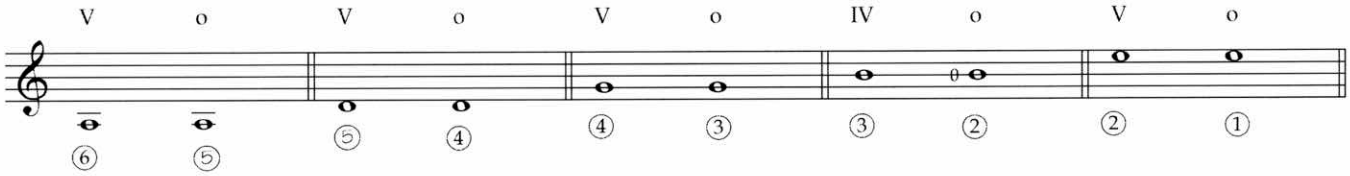
Appendix 2—Tuning

Despite the widespread use of digital tuners, we nevertheless often hear playing that isn't as in-tune as it might be. The reason for this is that while digital tuners do a good job of getting the open strings of our instruments in tune very quickly, they do not address all of the idiosyncratic issues that conspire to make truly fine tuning something of an art.

We'll take a look here at this easily underestimated topic from the standpoint of commonly-used tuning methods that don't actually work, equal-temperament, and the various practical considerations that allow us to tune quickly and to the highest standard our individual instruments will allow.

1 Common Tuning Methods—Strengths and Weaknesses

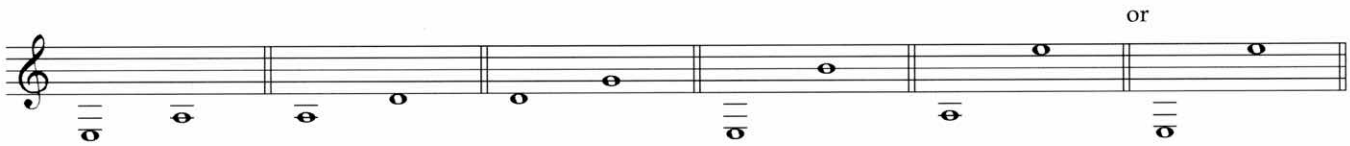
Fifth-Fret Method—this is a method many of us employed as our first tuning system. The process is simply to compare the fifth fret of a lower string to the next higher string played open (using fret four to compare strings ③and ②):



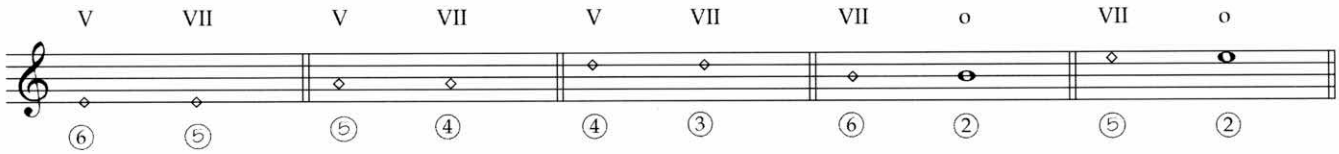
The main problem with this method, among several, is that tuning imperfections are carried across successive string pairs with the result that by the time the first string is reached it's quite unlikely to be in tune with the sixth string.

Open String Method—tuning successive string-pairs to the interval of a fourth (through string ③) or a compound-fifth or a double-octave (for strings ① and ②):

While this method reduces the risk of compounding inaccuracies, it's still unlikely to result in an optimal tuning (as we shall see in a moment).



Harmonics Method—comparing the fifth- and seventh-fret harmonics found between adjacent string-pairs:



While this method has the advantage of using easy to hear harmonic sounds, and is capable of putting the guitar quite close to an optimum intonation, it nevertheless doesn't take into account all that's required for truly optimal tuning (again, we'll see why in a moment).

Using a Digital Tuner—offers a number of advantages:

- they're invaluable for beginners, who initially have no other way of tuning
- they tune the open strings of the guitar quickly and accurately
- they tune to concert pitch—something that's beneficial for the general response of the individual instrument and for developing the ear

but also a few disadvantages:

- not all digital tuners are entirely accurate
- a digital tuner can be an obstacle to learning to fine-tune by ear—an indispensible musical skill
- although capable of tuning the open strings, this doesn't guarantee that the instrument is optimally tuned (see next)

2 Equal Temperament

So, what is it that prevents the aforementioned tuning methods from achieving an optimal tuning? There are two main reasons:

1) the equal-tempered placement of the frets along the fingerboard
2) the idiosyncrasies of individual instruments and their strings

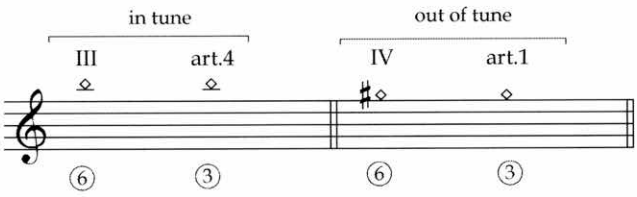
Equal temperament is a tuning system which divides the octave into twelve exactly equal half-steps. This results in all notes with the same letter-name sounding at the same frequency in all keys and allows us to play all intervals and chords in a tolerably in-tune (though equally out-of-tune) way in every key. The frets of the guitar are positioned according to this system.

Fretted Notes versus Open Strings

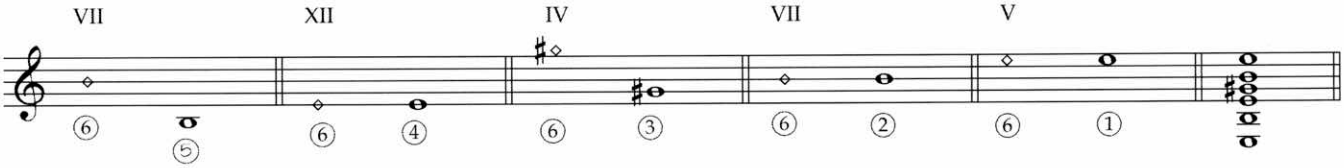
Tuning methods that make exact comparisons between open strings and harmonic sounds employ a kind of 'perfect intonation' system which conflicts with the equal-tempered tuning system of the frets.

In a perfect-intonation system, the fundamental pitch of each note in each key generates a unique set of frequencies (its *harmonic series*) for each note *name*. For example, the note B generated as the fifth scale-degree in the key of E-major does not sound at the same frequency as the note B generated as the major-third scale degree in G-major.

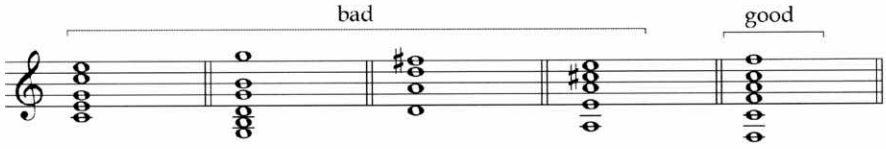
To illustrate these differences, we can compare natural (perfectly-intonated) harmonics generated on a selected string with artificial (fretted and, therefore, equal-tempered) harmonics found on another string. For example, tune the artificial harmonic found at fret-four on string ③ (a B) to the natural harmonic found on string ⑥ at fret 3. Then compare the natural harmonic found at fret 4 on string ⑥ (a G#) with the artificial harmonic found at fret 1 on string ③—the G# generated by string ③ will be significantly sharper than the G# generated by string ⑥:



Another way to illustrate this problem is to use natural harmonics generated on string ⑥ to tune the fretted notes and remaining open strings of a lower-position E-major chord:



The resulting E-major chord is *perfectly* in tune. But assess the intonation of other chord shapes (which employ different intervals between the various string sets):



Clearly, notes that have the same letter name are not identical pitches in every key!

The goal of equal temperament is to set a definitive frequency for each letter name, regardless of key, with the result that all intervals (except octaves) are slightly out of tune, but tolerably so with no interval, chord, or key being any better or worse than any other.

Idiosyncrasies of the Guitar

While an accurate digital tuner can put the open strings into a perfect equal-tempered tuning, this is still unlikely to result in an optimally-tuned instrument. The reason for this is that the guitar and its strings aren't perfect mechanical systems. Humidity, temperature, playing action, string gauge, string age, fret wear, guitar setup, and so on, can all have a small yet significant effect on the overall intonation of the instrument. It's therefore necessary to make a few tuning adjustments by ear, even after having tuned the open strings perfectly to an equal-tempered digital tuner. In the following section we'll explore an approach to obtaining the optimal tuning of an instrument.

3 Equal-Tempered Tuning Method

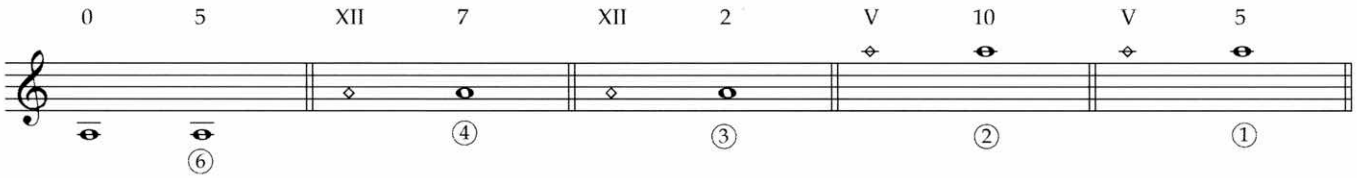
Three main steps:

1. Tune the open fifth-string to an external reference source and use an approximate tuning method (such as a digital tuner or the harmonics method) to get the instrument reasonably in tune.
2. Use one of the two methods described below to put the instrument into equal temperament.

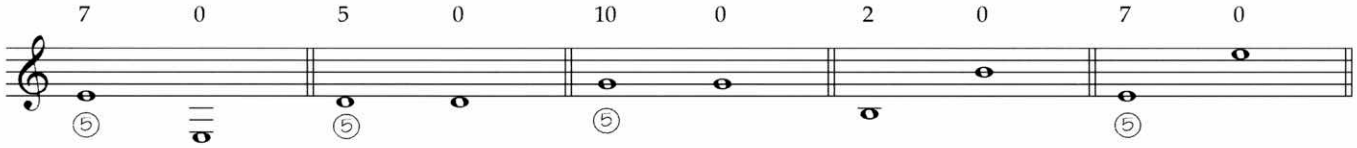
3. Use specific test intervals to fine-tune and compensate for instrumental idiosyncrasies.

Two methods of using an at-pitch fifth string to tune the remaining strings in equal temperament:

1. Use only the open string and/or octave harmonics on string ⑤, to tune fretted-only A pitches on the remaining strings:



2. Tune the five open-strings to fretted pitches on string ⑤:



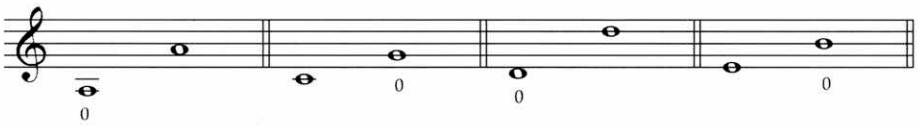
(Method 1 is preferable though, theoretically, both methods should work.)

A few general (and perhaps obvious) considerations to bear in mind during tuning (no matter which tuning system one might use):

- once the fifth string has been tuned to an external reference pitch we do not adjust it again during the tuning process
- allow the two tuning pitches to ring over one another and take the time necessary to carefully listen for the beats that result from out-of-tune pitches, both before tuning and as you turn the tuning peg—don't rush!
- even if a string is only slightly sharp it's generally easier and more reliable to lower the pitch a little and the raise the string to pitch
- take care not to fret with too much pressure (this can affect the intonation of the note) and avoid vibrato(!)
- on the other hand, pushing or pulling a string with the fretting finger can help us to determine whether the string is sharp or flat (in cases where it's close)

Fine Tuning—Test Intervals

Even on a well-adjusted guitar, it's usually necessary to compensate the tuning of strings ② and ③ to optimize the overall tuning of the instrument. We accomplish this by comparing string ③ with string ⑤ and string ② with string ④ as octaves and as fifths, adjusting the upper string of the pair so that both intervals are tolerable:

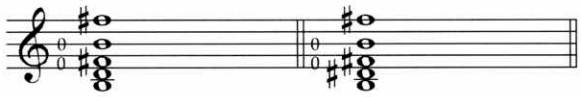


Listening carefully to these test intervals, you will notice that the fifths tend to sound flat while the octaves tend to sound sharp. Once you've adjusted the tuning of each upper string to cater for a tolerable intonation for both intervals, the guitar should play optimally in tune for all intervals, chords, and keys (assuming the instrument is set up reasonably well and the strings are relatively true).

> On some guitars, string ④ may need to be adjusted as well (raised), in which case it should be adjusted before compensating string ②.

4 Biased Tunings

On occasion, we may wish to bias or compensate our tuning to cater to a particular key. One example of this occurs when the third string is tuned to F# for the performance of lute and vihuela music. In this scordatura tuning, the keys of E and B (major and minor) contain wonderfully sonorous chords that cannot be reproduced in standard guitar tuning, all of which employ the open F# third string sounding as an open fifth against a fretted B-natural on the fifth string:



③ = F#

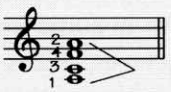
An equal-tempered third string is slightly flat in this situation and we can finesse the tuning in favor of the open-fifth interval (a little at the expense of fretted octaves) by raising it a little.

A similar situation occurs in early nineteenth-century music in the keys of C and G (where the fifth formed between the fretted bass tonic and the open third- or fourth string will sound a little flatter than it might. Similarly, the keys of E and A contain open treble-string fifths that sound against their fretted lower octaves. The key of D, on the other hand, contains fretted octaves and fifths which may therefore sound a little sharp against lower open strings.

In such cases, it's possible to subtly finesse the tuning of the treble strings involved (and perhaps raise string ④ a little) in favor of strong sounding tonic-chord fifths and octaves.

Left-Hand Intonation

It's also possible to compensate an interval during playing by pushing or pulling a string with a left-hand finger. The interval of a tenth in the following chord will almost always sound sharp (though sharp thirds are more tolerable to the ear than flat fifths and sharp octaves):



When time permits (at the end of a phrase, for example), it's possible to push the third string a little flat with its fretting finger.

Many opportunities for left-hand intonation present themselves in musical situations.

5 Dealing With Scordatura

Since guitar strings have elastic properties, when we alter the tension of a string it will attempt to return to its previous state. Consequently, when tuning the sixth string down to D for one of the many pieces that use that scordatura, the string begins to creep upwards in pitch and soon becomes intolerably sharp. The reverse occurs, of course, when we return a detuned string to normal pitch—it soon becomes intolerably flat.

> This is also one reason why it's a good idea to begin the fine-tuning process from an almost-tuned state, so that the changes in string tension that result from further tuning are negligible.

In order to stabilize a detuned or a retuned string we need to exaggerate the detuning or retuning involved. For example, if it takes three turns of the tuner to lower the sixth string to D, make 6 or 7 turns instead, wait a few seconds, and then raise the string to pitch. This has the effect of introducing a lower-tension string memory that balances the original higher-tension one.

When retuning a lowered string to pitch, similarly make a few extra turns of the tuner to bring the string a half-step or so *above* the desired pitch (and wait a few seconds before tuning to pitch). This compensates for the initial lower-tension memory of the string.

A Word About String Stretching
Guitarists sometimes resort to stretching (pulling) the strings when dealing with scordatura. We should bear in mind, however, that this can only be productive when returning a detuned string up to pitch. (Why?)

With a little experimentation (the system depends on particular tuners and string gauges), it's quite easy to develop a reliable, stable scordatura tuning method.

6 Tuning In Performance

With the heightened awareness that comes with a performance situation (an exam, an audition, a masterclass, a concert) it can be tempting to get down to the playing and forgo our carefully-developed system of tuning the guitar. We mustn't allow this to happen. We should regard our tuning ritual as an essential part of the performance itself. It's something that allows us to settle into the performance role, to collect ourselves, and take control of the performing situation. Not least, it's something that guarantees our intonation in performance (violinists and singers would kill for this!).

Still, we should also take care to tune appropriately in performance situations. In addition to listening carefully and sticking to our system, this also means tuning *quietly*. As an audience member, I don't wish to hear a succession of loud, apparently random, octaves, fifths, harmonics, and unisons as a 'prelude' to a piece of music. As a performer, this isn't something I wish to subject my audience to either.

Above all, develop a tuning system, stick with it, and never settle for poor intonation (regardless of whether you're playing in your practice room, at a masterclass, audition or competition, in a concert hall, or in a recording studio.)

Appendix 3—Practice Grids

Lesson 5
1 group per day (a four-day cycle with varied bass assignments for Groups 3 & 4) c.12′

Group 1	**ima**	**ma**	**im**	**ia**
day 1				
day 5				
day 9				
day 13				
(if needed)				
Done				

Group 2	**a**	**m**	**i**	**p**
day 2				
day 6				
day 10				
day 14				
(if needed)				
Done				

Group 3		**pima**	**pma**	**pim**	**pia**
day 3	⑤				
day 7	⑥				
day 11	⑤				
day 15	④				
(if needed)	⑤				
	⑥				
	⑤				
	④				
Done					

Group 4		**pi**	**pm**	**pa**
day 4	⑥			
day 8	⑤			
day 12	④			
day 16	⑤			
(if needed)	⑥			
	⑤			
	④			
	⑤			
Done				

Lesson 6
Group 1 each day until comfortable. Then Group 2, two patterns per day over a four-day cycle c. 6-7′

Group 1	**im**	**ia**	**i-ma**
day 1			
day 2			
day 3			
day 4			
day 5			
day 6			
Done			

	day 1	day 2	day 3	day 4
Group 2	**ima—iam**	**mia—mai**	**aim—ami**	**miai—aimi**
cycle 1				
cycle 2				
cycle 3				
Done				

Lesson 7

Group 1 & 2 on alternate days until comfortable. Then Group 3-6, in order, two patterns per day. c. 8′

	Group 1	**Group 2**
	day 1	day 2
	pi—pm—pa	**p-ami—p-mi—p-am—p-ia**
Done		

	Group 3		
	day 1	day 2	day 3
	pim—pmi	**pia—pai**	**pma—pam**
Done			

	Group 4	
	day 1	day 2
	p-i-ma—p-ma-i	**p-a-im—p-im-a**
Done		

	Group 5		
	day 1	day 2	day 3
	pimi—pmim	**piai—paia**	**p-i-ma-i—p-ma-i-ma**
Done			

	Group 6			
	day 1	day 2	day 3	day 4
	pima—piam	**pmia—pmai**	**paim—pami**	**pimi-aimi—pima-pami**
Done				

Lesson 8
Both groups together over a three-day cycle. c.8′

	day 1	day 2	day 3
Group 1	**ima—iam**	**mai—ami**	**a-im—i-ma**
Group 2	**pima—piam**	**pmai—pami**	**p-a-im—p-im-a—pimami**
Done			

Lesson 9
Ex 3, 5, 7 & 8 each day. Then Ex 3, 5, 7 & 9 each day.

	each day
	Ex 3—5—7—8
Done	

	each day
	Ex 3—5—7—9
Done	

Lesson 10
Ex. 1, 2 & 3 each day.

	each day
	Ex 1—2—3
Done	

Lesson 11
Exercises 1-6 over a six-day cycle. .

	day 1	day 2	day 3	day 4	day 5	day 6
	Ex. 1—2	**Ex. 1—3**	**Ex. 4—5a**	**Ex. 4—5a** (stacc.)	**Ex. 4—5b**	**Ex. 4—5b** (stacc.)
	Ex. 6	→	→	→	→	→
Done						

Lesson 12
ami, amip & pami each day.
Then with staccato
Ex. 11 & 12

	each day
	ami—amip—pami
Done	

Lesson 19
Ex. 1 & 2 over a three-day cycle. day.

	day 1	day 2	day 3
	Ex. 1 & 2	→	→
	1—2—3—4	**12—13—14—23—24—34**	**12-34—13-24—14-23**
Done			

Lesson 20
Ex. 1-4 each day followed by Group 1 c.9′

	day 1	day 2	day 3	day 4	day 5	day 6
Group 1	**12—34**	**13—24**	**14—23**	**012—034**	**013—024**	**014—023**
cycle 1						
cycle 2						
cycle 3						
cycle 4						
Done						

Then moving onto Ex. 1-4 each day followed by Group 2 c.9′

	day 1	day 2	day 3	day 4
Group 2	**124—324**	**134—432**	**0214—0324**	**0134—0432**
cycle 1				
cycle 2				
cycle 3				
cycle 4				
Done				

Then moving on to Ex. 1-4 each day followed by Groups 3 & 4 c.9′

	day 1	day 2	day 3	day 4	day 5	day 6
Groups 3 & 4	**123—432**	**234—321**	**1234—4321**	**1242—4313**	**1342—4212**	**123432—432123**
cycle 1						
cycle 2						
cycle 3						
cycle 4						
Done						

Lesson 22
Two patterns each day in both forms over a three-day cycle. c.5′

	day 1	day 2	day 3
	12—34	**13—24**	**14—23**
Done			

Lesson 23
Ex. 2 over a six-day cycle.

	day 1	day 2	day 3	day 4	day 5	day 6
	12—21 **34—43**	**13—31** **24—42**	**14—41** **23—32**	**124—421** **134—431**	**123—321** **234—432**	**1234** **4321**
Done						

Lesson 24
Ex. 2 over a six-day cycle.

	day 1	day 2	day 3	day 4	day 5	day 6
	12—21 **34—43**	**13—31** **24—42**	**14—41** **23—32**	**124—421** **134—431**	**123—321** **234—432**	**1234** **4321**
Done						

Lesson 25
Over a four-day cycle. c. 10′

	day 1	day 2	day 3	day 4
	a)	*b)*	*c)*	*d)*
cycle 1				
cycle 2				
cycle 3				
cycle 4				
Done				

Lesson 27
Over a three-day cycle. c. 6′

each day	day 1	day 2	day 3
01—02—03—04	→	→	→
	12—34—124	**13—24—134**	**14—23—1234**
cycle 1			
cycle 2			
cycle 3			
cycle 4			
Done			

Lesson 28
Over a three-day cycle. c. 6′

each day	day 1	day 2	day 3
10—20—30—40	→	→	→
	21—210—43—430	**31—310—42—420**	**41—410—32—320**
cycle 1			
cycle 2			
cycle 3			
cycle 4			
Done			

Lesson 29
Over a three-day cycle. c. 6′

	day 1	day 2	day 3
	421—4210—321—3210	**431—4310—432—4320**	**4321—43210**
cycle 1			
cycle 2			
cycle 3			
cycle 4			
Done			

Lesson 30
Over a three-day cycle. c. 12′

	day 1	day 2	day 3
	121—1210—343—3430 **313—3130—424—4240**	**131—1310—242—2420** **414—4140—323—3230**	**141—1410—232—2320** **212—2120—434—4340**
cycle 1			
cycle 2			
cycle 3			
cycle 4			
Done			

In Part 2 of Classical Guitar Technique

Mastery and Virtuosity

The lessons in Part 2 of *Classical Guitar Technique*—Mastery and Virtuosity—continue to develop and refine the technical elements explored in Part 1, realizing them in fully-developed form in such areas as refinement of sound, tremolo, cross-string ornaments, velocity fingerings, and rapid scales.

Responding more directly to practical goals (applied technique), Part 2 includes numerous repertoire excerpts, survey sections dealing with historical aspects of a technique under discussion, and lists of repertoire that relies heavily on a particular technique. The historical surveys are not intended to be merely of academic interest; rather, they connect finger technique to musical style, sound, and interpretation.

The broad topics covered are as follows:

Right-Hand Lessons

1 Refinement of Sound

31 Free Stroke Sound
32 Dynamics
33 Tone-Color Contrasts
34 Melodic Tone versus Accompaniment Tone
35 Voicing Block Chords
36 The Thumb
37 Hand Position—Timbre, Volume, or Velocity?
38 Damping
39 Rasgueado
40 Artificial Harmonics

2 Advanced Arpeggio Technique

41 Independence Patterns
42 Further Useful Patterns
43 Further Practice Methods
44 Virtuosity
45 Advanced Repertoire Excerpts

3 Advanced Tremolo Technique

46 Refinement
47 Further Development
48 Agogic and Dynamic Inflexion
49 Advanced Tremolos (virtuosity)
50 Historical Survey and Repertoire

4 Cross-String Ornaments

51 Right-Hand Glissando
52 Fully-Fingered Ornaments
53 Longer Ornaments
54 Historical Survey and Repertoire

5 Advanced Alternation (Scale) Technique

55 Rest-Stroke Alternation and String Crossing
56 Developing Rest-Stroke Alternation Speed
57 Free-Stroke / Rest-Stroke Mixture
58 Maximizing Velocity
59 String Crossing at Speed
60 Correcting Awkward String Crossings at Speed
61 Velocity Fingerings (Virtuosity)
62 Application

Left-Hand Lessons and Appendices

1 Independence and Coordination

63 Further Control of the Fourth Finger
64 Further Melodic Coordination Exercises
65 Independence Between the Hands
66 The Left-Hand in Fast Scales
67 Further Fixed-Position Scale Practice
68 Further Intervallic Coordination Exercises
69 Chromatic-Octave Exercises

2 Advanced Slur Technique

70 Further Slur Technique
71 Gymnastic Slur Exercises
72 Miscellaneous Slur Techniques

3 Advanced Shifting

73 Further Position Shifting (Legato and Reliability)
74 Single-String Chromatic Scales
75 Shifting Between Chord-Forms
76 Shifting Along the Lower-Strings (Eliminating Extraneous Noise)

4 Other

77 Glissando
78 Left-Hand Harmonics
79 Left-Hand Reach (Extension)
80 Vibrato
81 Left-Hand Damping

Appendices

1 Special Effects
2 Right-Hand Fingering Guidelines
3 Left-Hand Fingering Guidelines
4 Technical Approach to Learning New Repertoire
5 Iconic Method Books and Study Sets
6 Practice Grids

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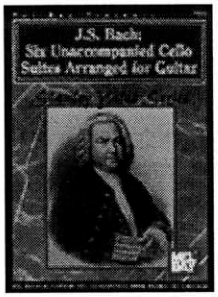

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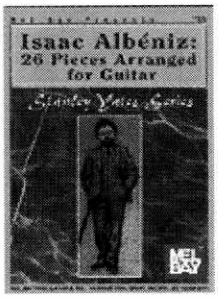

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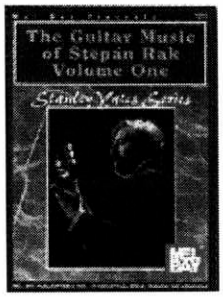

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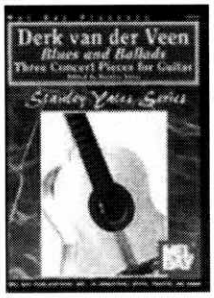

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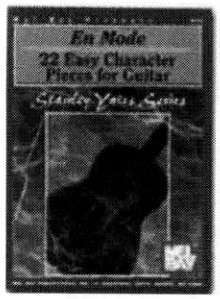

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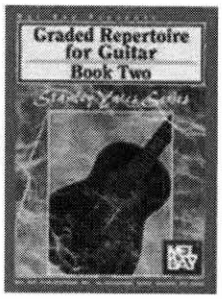

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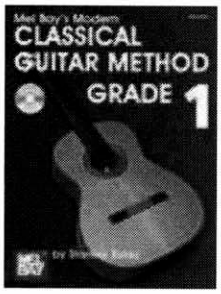

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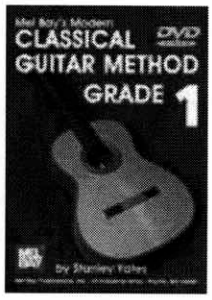

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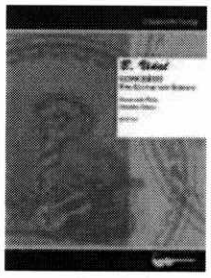

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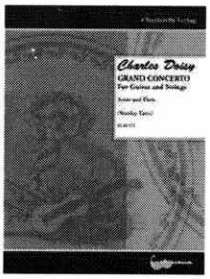

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I welcome readers to contact me by email at ***info@StanleyYates.com*** with observations or other comments they may have.

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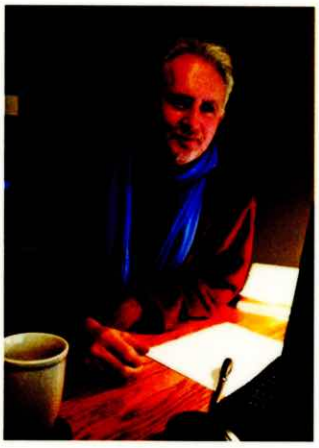

Stanley Yates has established an international career as performer, teacher, and scholar. His performances have taken him throughout North America and Europe, as well as to Asia, Australia, and South America. His performances and numerous best-selling editions have been the subject of widespread critical-acclaim while his articles dealing with various aspects of the classical guitar have been published in ten languages.

The subject of interviews and extended reviews in numerous international magazines and journals, he is also featured in *Instrumental Influences: Reflections on the Classical Guitar from the Instrument's Most Influential Performers and Pedagogues* and the standard reference work *The Classical Guitar: Its Evolution, Players and Personalities Since 1800*.

He has been an artistic advisory board member of the Guitar Foundation of America, an editorial board member of the European Guitar Teachers Association, guitar forum editor for the American String Teachers Association, and is Professor of Music at Austin Peay State University, home of Tennessee's Center of Excellence for the Creative Arts.

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